

## SEARCH REQUEST FORM

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### Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

please search the structure of claim 1.

Please see attached

useful as an anti-oxidant

Thank you  
CRM Deloach/11

Point of Contact:  
Alex Waclawiw  
Technical Info. Specialist  
CM1 12C14 Tel: 308-4491

Ref 15

### STAFF USE ONLY

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Total time: \_\_\_\_\_  
Number of Searches: \_\_\_\_\_  
Number of Databases: \_\_\_\_\_

#### Search Site

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#### Type of Search

N.A. Sequence  
 A.A. Sequence  
 Structure  
 Bibliographic

#### Vendors

IG  
 STN  
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 APS  
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 SDC  
 DARC/Questel  
 Other

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31

Delacroix 09/029, 686

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L1 STR  
L2 ( 15121)SEA FILE=REGISTRY SSS FUL L1  
L3 ( 11715)SEA FILE=REGISTRY ABB=ON L2 AND (MN OR CO OR CU OR FE OR V  
OR  
L4 STR  
L5 8397 SEA FILE=REGISTRY SUB=L3 SSS FUL L4

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FILE 'CAPLUS' ENTERED AT 13:55:54 ON 18 MAR 1999

L6 3270 S L5  
L7 64010 S ANTIOXID?  
L8 36 S L6 AND L7  
E MALFROY CAMINE/AU  
L9 17 S E3-5  
E DOCTROW S/AU  
L10 23 S E4-7  
L11 36 S L9 OR L10  
L12 29 S L8 NOT L11  
L13 7 S L8 AND L11

→ all other references  
→ inventors references

Delacroix 09/029,686

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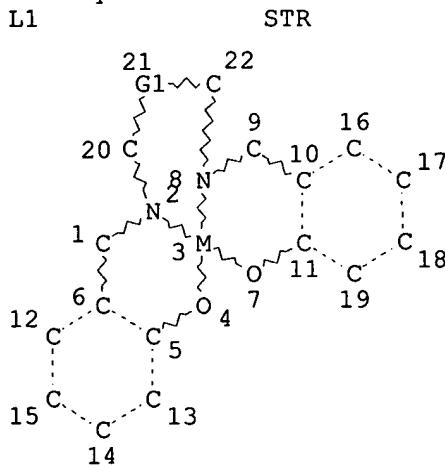
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L3 ( 11715)SEA FILE=REGISTRY ABB=ON L2 AND (MN OR CO OR CU OR FE OR V  
OR  
L4 STR  
L5 8397 SEA FILE=REGISTRY SUB=L3 SSS FUL L4

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DEFAULT ECLEVEL IS LIMITED

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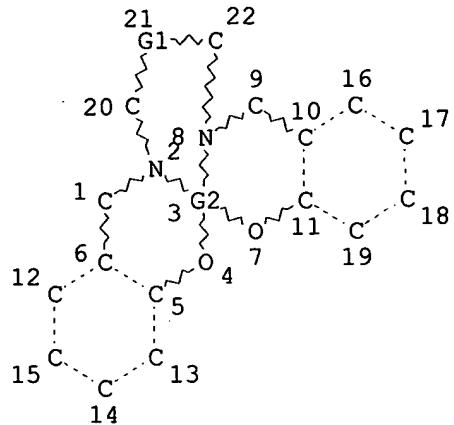
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

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L3 ( 11715)SEA FILE=REGISTRY ABB=ON L2 AND (MN OR CO OR CU OR FE OR V  
OR  
CR OR NI)/ELS  
L4 STR



REP G1=(0-2) C  
VAR G2=MN/CO/CU/FE/V/CR/NI

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 4  
CONNECT IS E2 RC AT 7  
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GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L5 8397 SEA FILE=REGISTRY SUB=L3 SSS FUL L4

100.0% PROCESSED 11715 ITERATIONS  
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8397 ANSWERS

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26, 1996), unless otherwise indicated in the original publications.

FILE COVERS 1967 - 18 Mar 1999 VOL 130 ISS 12  
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substance identification.

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FILE 'CAPLUS' ENTERED AT 13:55:54 ON 18 MAR 1999  
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L7 64010 S ANTIOXID?  
L8 36 S L6 AND L7  
E MALFROY CAMINE/AU  
L9 17 S E3-5  
E DOCTROW S/AU  
L10 23 S E4-7  
L11 36 S L9 OR L10  
L12 29 S L8 NOT L11 > references excluding inventor's  
L13 7 S L8 AND L11

=> d .ca hitstr 112 1-29

L12 ANSWER 1 OF 29 CAPLUS COPYRIGHT 1999 ACS  
AN 1998:176006 CAPLUS  
DN 128:226221  
TI Methods using manganese superoxide dismutase-deficient mouse for testing compounds for use as therapeutic **antioxidants**  
IN Wallace, Douglas C.; Melov, Simon L.; Crapo, James D.; Day, Brian J.  
PA Emory University, USA; Duke University  
SO PCT Int. Appl., 47 pp.  
CODEN: PIXXD2

DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9810057	A1	19980312	WO 97-US15814	19970905
	W: AU, CA, JP				
SE	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				

PRAI US 96-24702 19960906  
WO 97-US15814 19970905

AB Methods are described for the testing of compds. of potential usefulness as therapeutic **antioxidants** and/or as therapeutic free radical scavengers. The animal model for testing such compds. is the Sod2CJE homozygous manganese superoxide dismutase-deficient mouse. When pups of these mice are treated with certain **antioxidants**, they survive past about 7 days of age, and later develop characteristic histol. changes

and characteristic neurobehavioral disorders. Those treated mice can be further treated with test compds. which may or may not cross the blood brain barrier, and the life span and phys. and neurobehavioral

Alex  
308-4491

characteristics of those mice provide information about the potential utility of the test compd. as a therapeutic **antioxidant**.

Phenotypes of the treated mice allow conclusions regarding targeted areas of the brain and thus, applications to particular disorders, e.g. Parkinsonism.

IT 53177-12-1

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(manganese superoxide dismutase-deficient mouse for testing compds.

for

use as therapeutic **antioxidants**)

IC ICM C12N005-00

ICS C12N015-00; A61K049-00

CC 1-1 (Pharmacology)

Section cross-reference(s): 14, 78

ST superoxide dismutase deficient mouse **antioxidant** effectiveness; radical scavenger effectiveness MnSOD deficient mouse; Parkinsonism drug superoxide dismutase deficient mouse

IT Genes (animal)

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (apoptotic; manganese superoxide dismutase-deficient mouse for testing compds. for use as therapeutic **antioxidants**)

IT Convulsions

(audiogenic; manganese superoxide dismutase-deficient mouse for testing compds. for use as therapeutic **antioxidants**)

IT Liver

(lipids; manganese superoxide dismutase-deficient mouse for testing compds. for use as therapeutic **antioxidants**)

IT Hypolipemic agents

(liver lipids; manganese superoxide dismutase-deficient mouse for testing compds. for use as therapeutic **antioxidants**)

IT **Antioxidants**

Blood-brain barrier

Brain injury

Cardiomyopathy

Cardioprotectants

Drug screening

Mitochondria

Mouse

Radical scavengers

(manganese superoxide dismutase-deficient mouse for testing compds.

for

use as therapeutic **antioxidants**)

IT Behavior (animal)

(neurobehavior; manganese superoxide dismutase-deficient mouse for testing compds. for use as therapeutic **antioxidants**)

IT Genes (animal)

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (sod2; manganese superoxide dismutase-deficient mouse for testing compds. for use as therapeutic **antioxidants**)

IT 53177-12-1 73202-95-6

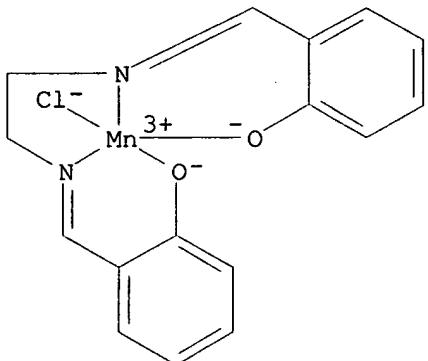
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(manganese superoxide dismutase-deficient mouse for testing compds.

for

use as therapeutic **antioxidants**)

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IT 9054-89-1, Superoxide dismutase  
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
(manganese; manganese superoxide dismutase-deficient mouse for testing  
compds. for use as therapeutic **antioxidants**)  
IT 11132-78-8, Manganese chloride 14609-54-2  
RL: RCT (Reactant)  
(reaction; manganese superoxide dismutase-deficient mouse for testing  
compds. for use as therapeutic **antioxidants**)  
IT 53177-12-1  
RL: BAC (Biological activity or effector, except adverse); THU  
(Therapeutic use); BIOL (Biological study); USES (Uses)  
(manganese superoxide dismutase-deficient mouse for testing compds.  
for  
use as therapeutic **antioxidants**)  
RN 53177-12-1 CAPLUS  
CN Manganese, chloro[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[phenolato-.kappa.O]](2-)]-, (SP-5-13)- (9CI)  
(CA INDEX NAME)



L12 ANSWER 2 OF 29 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:189612 CAPLUS  
DN 127:579  
TI Vasodilatory effects of a salen-manganese complex with potent oxyradical scavenger activities  
AU Barandier, Christine; Boucher, Francois; Malfroy, Bernard; De Leiris, Joel  
CS Groupe Physiopathologie Cellulaire Cardiaque, Universite Joseph Fourier, Grenoble, F-38041, Fr.  
SO J. Vasc. Res. (1997), 34(1), 49-57  
CODEN: JVREE9; ISSN: 1018-1172  
PB Karger  
DT Journal  
LA English  
AB The effects of EUK-8, a salen-Mn complex with high superoxide dismutase and catalase activities, on rat aorta were investigated. EUK-8 protected the acetylcholine-induced relaxation of rat aortic rings from inhibition by superoxide anions and reduced H<sub>2</sub>O-induced relaxation. Moreover, EUK-8 dose-dependently relaxed rat aorta precontracted with phenylephrine and decreased the vascular tone of noncontracted aortic rings. The relaxant effect of EUK-8 was potentiated by endothelium abrasion and/or

preincubation with N-nitro-L-arginine Me ester, an inhibitor of NO synthase. Indomethacin had no effect on the action of EUK-8, showing that

it was not dependent on prostacyclin synthesis. Methylene blue, an inhibitor of sol. guanylate cyclase, partly abolished relaxation induced by EUK-8. Incubation of rat aorta with EUK-8 induced an increase in vascular cAMP content. The lack of inhibition by dl-propranolol showed that adenylate cyclase activation by EUK-8 was not mediated through  $\beta$ -adrenergic receptors. The inhibition of the effects of EUK-8 by tetraethylammonium and glibenclamide showed the implication of potassium channels in the intracellular cascade triggered by EUK-8. The vasorelaxant activity of EUK-8 was neither affected by xanthine oxidase inhibition nor by superoxide anion scavenging. Finally, the ligand for EUK-8 without its **antioxidant** activities because of the absence of manganese, conversely potentiated phenylephrine-induced contraction of aortic rings.

IT 53177-12-1, EUK-8

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(vasodilatory effects of a salen-manganese complex with potent oxyradical scavenger activities)

CC 1-8 (Pharmacology)

IT 53177-12-1, EUK-8

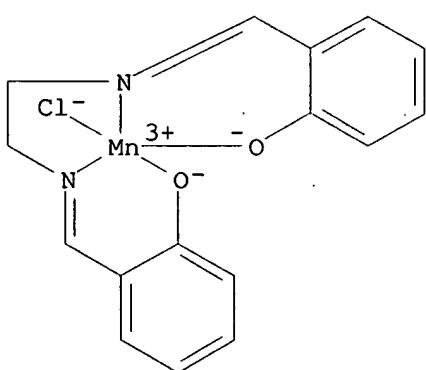
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(vasodilatory effects of a salen-manganese complex with potent oxyradical scavenger activities)

IT 53177-12-1, EUK-8

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(vasodilatory effects of a salen-manganese complex with potent oxyradical scavenger activities)

RN 53177-12-1 CAPLUS

CN Manganese, chloro[2,2'-(1,2-ethanediyl)bis[(nitrilo-.kappa.N)methylidyne]]bis[phenolato-.kappa.O]](2-)]-, (SP-5-13)- (9CI)  
(CA INDEX NAME)



L12 ANSWER 3 OF 29 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:30121 CAPLUS

DN 126:126681

TI EUK-134, a synthetic superoxide dismutase and catalase mimetic, protects rat kidneys from ischemia-reperfusion-induced damage  
AU Gianello, Pierre; Saliez, Alain; Bufkens, Xavier; Pettinger, Rene;  
Misseeleyn, Dominique; Hori, Seiji; Malfroy, Bernard  
CS Medical School, University Louvain, Brussels, 1200, Belg.  
SO Transplantation (1996), 62(11), 1664-1666  
CODEN: TRPLAU; ISSN: 0041-1337  
PB Williams & Wilkins  
DT Journal  
LA English  
AB The effect of a new synthetic superoxide dismutase and catalase mimetic was investigated on renal ischemia-reperfusion syndrome in rats. Synthetic salen-manganese complexes have characteristics that might facilitate their potential usefulness as therapeutic agents: (1) unlike proteinaceous antioxidant enzymes, synthetic complexes, due to their low mol. wt., have a better stability and bioavailability; (2) they have a catalytic activity enhancing their efficiency over noncatalytic reactive oxygen metabolite scavengers; and finally, (3) exhibiting combined superoxide dismutase and catalase activity, they destroy both superoxide anions and hydrogen peroxides, thereby enhancing their protective effect on ischem. injured tissues. One such compd., EUK-134, was tested in uninephrectomized rats that underwent a left renal artery clamping. After a 75-min left renal artery clamping, a single i.v. injection of EUK-134 at 0.2 mg/kg, just before unclamping, provided significantly better renal function recovery during the week after the ischemic insult compared with recovery of untreated animals. Two hours after several periods of renal ischemia (30, 45, 60, and 75 min of left renal artery clamping), EUK-134 given at a similar dose significantly improved the glomerular filtration rate after an acute ischemia of 30 and 45 min, as assessed by EDTA 51Cr. Overall, these results show that synthetic superoxide dismutase-catalase mimetics such as EUK-134 can protect ischem. injured rat kidneys from ischemia-reperfusion syndrome when administered just before reperfusion.  
IT 186467-37-8, EUK 134  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(EUK-134, synthetic superoxide dismutase and catalase mimetic,  
protects  
rat kidneys from ischemia-reperfusion-induced damage)  
CC 1-8 (Pharmacology)  
IT 186467-37-8, EUK 134  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(EUK-134, synthetic superoxide dismutase and catalase mimetic,  
protects  
rat kidneys from ischemia-reperfusion-induced damage)  
IT 186467-37-8, EUK 134  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(EUK-134, synthetic superoxide dismutase and catalase mimetic,  
protects  
rat kidneys from ischemia-reperfusion-induced damage)  
RN 186467-37-8 CAPLUS  
L12 ANSWER 4 OF 29 CAPLUS COPYRIGHT 1999 ACS  
AN 1996:684323 CAPLUS  
DN 126:17317

TI Free radicals in reperfusion-induced arrhythmias: study with EUK 8, a novel nonprotein catalytic **antioxidant**  
AU Tanguy, Stephane; Boucher, Francois R.; Malfroy, Bernard; De Leiris, Joel G.  
CS Physiopathologie Cellulaire Cardiaque, Universite Joseph Fourier, Grenoble, Fr.  
SO Free Radical Biol. Med. (1996), 21(7), 945-954  
CODEN: FRBMEH; ISSN: 0891-5849  
PB Elsevier  
DT Journal  
LA English  
AB Oxyradicals have been implicated as a possible cause of postischemic reperfusion arrhythmias (RA). However, the ability of enzymic scavengers such as superoxide dismutase and/or catalase to reduce RA remains controversial. The purpose of the present work was to det. whether a nonprotein catalytic **antioxidant**, EUK 8, may limit RA in isolated heart preps. The catalytic dismutation of H<sub>2</sub>O<sub>2</sub> by EUK 8 was demonstrated using a Clark electrode. EUK 8's ability to scavenge oxyradicals was studied in vitro by ESR in presence of superoxide-anion generating system. ESR concn.-effect curves obtained led the authors to use EUK 8 at 50 .mu.mol/l in isolated heart preps. Isolated rat hearts were submitted to 10 min regional ischemia induced by left coronary artery ligation. Reperfusion was achieved by releasing the coronary ligation, and the incidence and duration of early ventricular arrhythmias were then investigated. In the treated-group, EUK 8 was added to the perfusion fluid (50 .mu.mol) 90 s before reperfusion. The results show that EUK 8 reduced the severity of RA as assessed by the arrhythmia score measurement. In conclusion, EUK 8 is able to limit RA in the authors' expt. model. This effect might be related to the catalytic **antioxidant** properties of this complex.  
IT 53177-12-1, EUK 8  
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(EUK 8, a nonprotein catalytic **antioxidant**, limits reperfusion arrhythmias, which may be related to EUK 8's **antioxidant** properties)  
CC 14-5 (Mammalian Pathological Biochemistry)  
Section cross-reference(s): 1  
IT Antioxidants  
Myocardial ischemia  
Oxidative stress (biological)  
(EUK 8, a nonprotein catalytic **antioxidant**, limits reperfusion arrhythmias, which may be related to EUK 8's **antioxidant** properties)  
IT Reactive oxygen species  
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(EUK 8, a nonprotein catalytic **antioxidant**, limits reperfusion arrhythmias, which may be related to EUK 8's **antioxidant** properties)  
IT Reperfusion  
(of ischemic heart; EUK 8, a nonprotein catalytic **antioxidant**, limits reperfusion arrhythmias, which may be related to EUK 8's **antioxidant** properties)  
IT Ventricular arrhythmia  
(reperfusion-induced; EUK 8, a nonprotein catalytic **antioxidant**, limits reperfusion arrhythmias, which may be related to EUK 8's **antioxidant** properties)

antioxidant properties)

IT 7722-84-1, Hydrogen peroxide, biological studies 7782-44-7D, Oxygen, radicals 11062-77-4, Superoxide  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
 (EUK 8, a nonprotein catalytic antioxidant, limits  
 reperfusion arrhythmias, which may be related to EUK 8's  
 antioxidant properties)

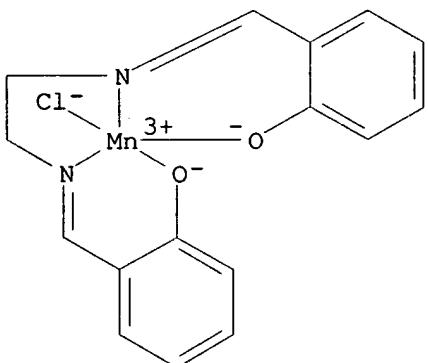
IT 9001-05-2, Catalase  
 RL: BAC (Biological activity or effector, except adverse); BIOL  
 (Biological study)  
 (EUK 8, a nonprotein catalytic antioxidant, limits  
 reperfusion arrhythmias, which may be related to EUK 8's  
 antioxidant properties)

IT 53177-12-1, EUK 8  
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (EUK 8, a nonprotein catalytic antioxidant, limits  
 reperfusion arrhythmias, which may be related to EUK 8's  
 antioxidant properties)

IT 53177-12-1, EUK 8  
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (EUK 8, a nonprotein catalytic antioxidant, limits  
 reperfusion arrhythmias, which may be related to EUK 8's  
 antioxidant properties)

RN 53177-12-1 CAPLUS

CN Manganese, chloro[2,2'-(1,2-ethanediyl)bis[(nitrilo-.kappa.N)methylidyne]]bis[phenolato-.kappa.O]](2-)]-, (SP-5-13)- (9CI)  
 (CA INDEX NAME)



L12 ANSWER 5 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1996:316370 CAPLUS  
 DN 125:51912  
 TI Antioxidative activity of biologically active compounds:  
 Measurement by Cypridina chemiluminescence method  
 AU Suzuki, N.; Mashiko, S.; Hamada, M.; Nomoto, T.; Hasegaga, M.; Yoda, B.  
 CS National University Fisheries, Shimonoseki, 759-65, Japan  
 SO Biolumin. Chemilumin., Proc. Int. Symp., 8th (1994), 219-222. Editor(s):  
 Campbell, Andrew Keith; Kricka, Larry J.; Stanley, Philip E. Publisher:  
 Wiley, Chichester, UK.

DT CODEN: 62UZAR  
LA English  
AB The highly sensitive Cypridina chemiluminescence method previously developed by the authors was used to det. the **antioxidative** activity of various peptides and salcomine derivs. Proteins from marine life showed 1-2 orders larger reaction rate consts. than did those from land animals and plants. Hydrolyzates of the proteins from land animals showed larger consts. than did the unhydrolyzed proteins. The salcomine derivs. were also strong **antioxidants**.  
IT 14167-18-1, Salcomine 14167-18-1D, Salcomine, derivs.  
14167-20-5 60306-16-3  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(**antioxidative** activity of biol. active compds.)  
CC 6-7 (General Biochemistry)  
ST antioxidant protein salcomine deriv  
IT Polydactylus sexfilis  
(actin and actomyosin; **antioxidative** activity of biol. active compds.)  
IT **Antioxidants**  
(**antioxidative** activity of biol. active compds.)  
IT Protein hydrolyzates  
Caseins, biological studies  
Peptides, biological studies  
Proteins, biological studies  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(**antioxidative** activity of biol. active compds.)  
IT Euthynnus pelamis  
(collagen and gelatin; **antioxidative** activity of biol. active compds.)  
IT Proteins, specific or class  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(egg white K; **antioxidative** activity of biol. active compds.)  
IT Sardine  
(myofibril; **antioxidative** activity of biol. active compds.)  
IT Soybean  
(peptides; **antioxidative** activity of biol. active compds.)  
IT Myosins  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(red horsehead; **antioxidative** activity of biol. active compds.)  
IT Collagens, biological studies  
Gelatins, biological studies  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(skipjack tuna; **antioxidative** activity of biol. active compds.)  
IT Actins  
Actomyosins  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(threadfin bream; **antioxidative** activity of biol. active compds.)

IT Gelatins, biological studies  
RL: BAC (Biological activity or effector, except adverse); BIOL  
(Biological study)  
(hydrolyzates, skipjack tuna; **antioxidative** activity of biol.  
active compds.)

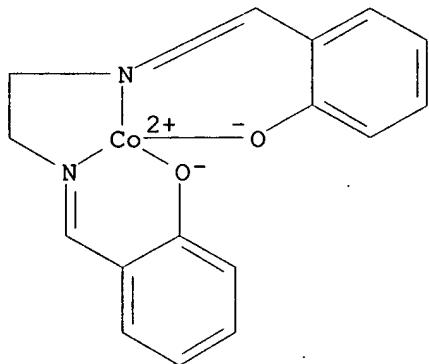
IT Organelle  
(myofibril, sardine; **antioxidative** activity of biol. active  
compds.)

IT 14167-18-1, Salcomine 14167-18-1D, Salcomine, derivs.  
14167-20-5 41139-17-7 60306-16-3  
RL: BAC (Biological activity or effector, except adverse); BIOL  
(Biological study)  
(**antioxidative** activity of biol. active compds.)

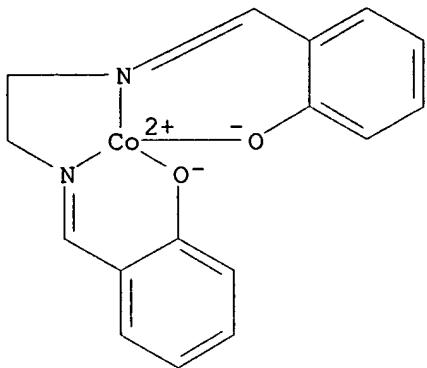
IT 14167-18-1, Salcomine 14167-18-1D, Salcomine, derivs.  
14167-20-5 60306-16-3  
RL: BAC (Biological activity or effector, except adverse); BIOL  
(Biological study)  
(**antioxidative** activity of biol. active compds.)

RN 14167-18-1 CAPLUS

CN Cobalt,  
[[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



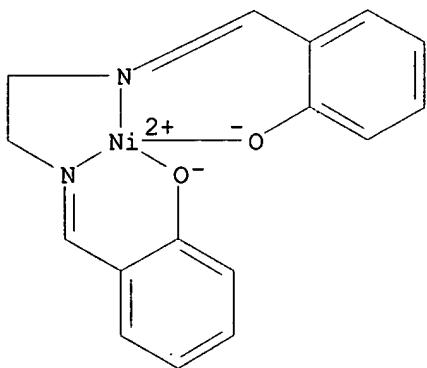
RN 14167-18-1 CAPLUS  
CN Cobalt,  
[[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 14167-20-5 CAPLUS

CN Nickel,

[ [2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[phenolato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)

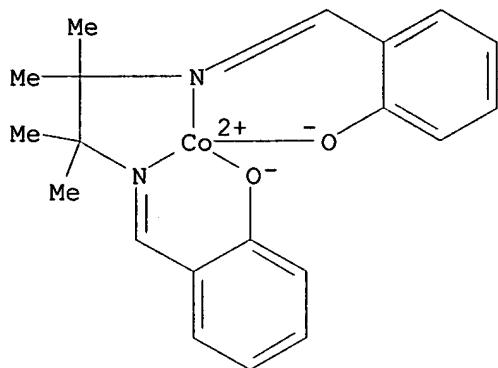


RN 60306-16-3 CAPLUS

CN Cobalt, [ [2,2'-(1,1,2,2-tetramethyl-1,2-ethanediyl)bis[(nitrilo-.kappa.N)methylidyne])bis[phenolato-.kappa.O]](2-)]-, (SP-4-2)- (9CI)

(CA

INDEX NAME)



L12 ANSWER 6 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1996:180742 CAPLUS  
 DN 124:279072  
 TI  $\beta$ -Amyloid toxicity in organotypic hippocampal cultures: protection by EUK-8, a synthetic catalytic free radical scavenger  
 AU Bruce, Annadora J.; Malfroy, Bernard; Baudry, Michel  
 CS Neurosci. Program, Univ. Southern California, Los Angeles, CA,  
 90089-2520,  
 USA  
 SO Proc. Natl. Acad. Sci. U. S. A. (1996), 93(6), 2312-16  
 CODEN: PNASA6; ISSN: 0027-8424  
 DT Journal  
 LA English  
 AB Oxygen free radicals have been proposed to mediate amyloid peptide ( $\beta$ .AP)-induced neurotoxicity. To test this hypothesis, we evaluated the effect of EUK-8, a synthetic catalytic superoxide and hydrogen peroxide scavenger, on neuronal injury produced by  $\beta$ .AP in organotypic hippocampal slice cultures. Cultures of equiv. postnatal day 35 (defined as mature) and 14 (defined as immature) were exposed to various concns. of  $\beta$ .AP (1-42 or 1-40) in the absence or presence of 25  $\mu\text{M}$  EUK-8 for up to 72 h. Neuronal injury was assessed by lactate dehydrogenase release and semiquant. anal. of propidium iodide uptake at various times after the initiation of  $\beta$ .AP exposure. Free radical prodn. was inferred from the relative increase in dichlorofluorescein fluorescence, and the degree of lipid peroxidn. was detd. by assaying thiobarbituric acid-reactive substances. Treatment of mature cultures with  $\beta$ .AP (50-250  $\mu\text{g/mL}$ ) in serum-free conditions resulted in a reproducible pattern of damage, causing a time-dependent increase in neuronal injury accompanied with formation of reactive oxygen species. However, immature cultures were entirely resistant to  $\beta$ .AP-induced neurotoxicity and also demonstrated no dichlorofluorescein fluorescence or increased lipid peroxidn. after  $\beta$ .AP treatment. Moreover, mature slices exposed to  $\beta$ .AP in the presence of 25  $\mu\text{M}$  EUK-8 were significantly protected from  $\beta$ .AP-induced neurotoxicity. EUK-8 also completely blocked

.beta.AP-induced free radical accumulation and lipid peroxidn. These results not only support a role for oxygen free radicals in .beta.AP toxicity but also highlight the therapeutic potential of synthetic radical

scavengers in Alzheimer disease.

IT 53177-12-1, Euk-8

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
.beta.-amyloid toxicity in organotypic hippocampal cultures inhibition

by EUK-8, a synthetic catalytic free radical scavenger)

CC 1-12 (Pharmacology)

Section cross-reference(s): 14

ST antioxidant EUK8 beta amyloid neurotoxicity hippocampus

IT Antioxidants

Nerve

.beta.-amyloid toxicity in organotypic hippocampal cultures inhibition

by EUK-8, a synthetic catalytic free radical scavenger)

IT 53177-12-1, Euk-8

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
.beta.-amyloid toxicity in organotypic hippocampal cultures inhibition

by EUK-8, a synthetic catalytic free radical scavenger)

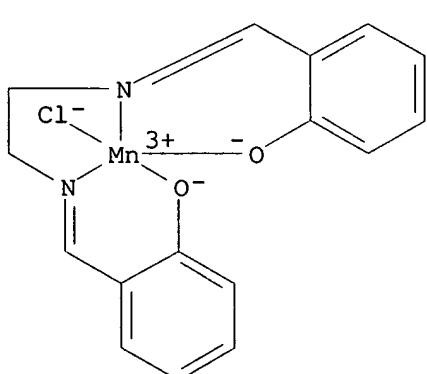
IT 53177-12-1, Euk-8

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
.beta.-amyloid toxicity in organotypic hippocampal cultures inhibition

by EUK-8, a synthetic catalytic free radical scavenger)

RN 53177-12-1 CAPLUS

CN Manganese, chloro[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[phenolato-.kappa.O]](2-)]-, (SP-5-13)- (9CI)  
(CA INDEX NAME)



L12 ANSWER 7 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1995:994554 CAPLUS

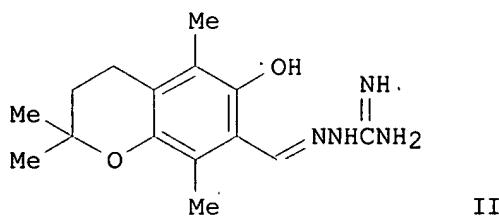
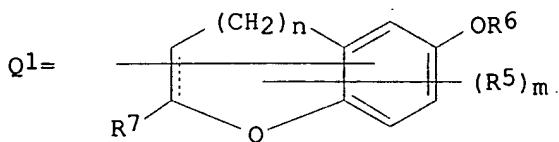
DN 124:55795

TI Preparation and formulation of chromanylideneaminoguanidines and analogs

Page 15

as Maillard reaction-inhibiting antioxidants  
 IN Ohuchida, Shuichi; Hasegawa, Tomoyuki; Kishimoto, Kazuo  
 PA Ono Pharmaceutical Co., Ltd., Japan  
 SO PCT Int. Appl., 90 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9523796	A1	<u>19950908</u>	WO 95-JP294	19950227
			W: CA, CN, JP, KR, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE		
PRAI	JP 94-55223		19940301		
OS	MARPAT 124:55795				
GI					



AB The title compds. R<sub>1</sub>CR<sub>2</sub>(:N)NHC(:NH)NHR<sub>3</sub> (I) [R<sub>1</sub> represents R<sub>4A</sub> (A is a single bond, alkylene or phenylalkylene; and R<sub>4</sub> is Q<sub>1</sub>); R<sub>2</sub> represents hydrogen, alkyl, Ph, phenylalkyl, etc.; or R<sub>1</sub> and R<sub>2</sub> together with the carbon atom to which they are bonded represent cycloalkyl fused with R<sub>4</sub>; and R<sub>3</sub> represents hydrogen, alkyl or acyl; provided when A represents phenylalkylene, the Ph is bonded to the carbon atom to which R<sub>2</sub> is bonded; R<sub>5</sub> = H, alkyl; R<sub>6</sub> = H, alkyl, acyl; R<sub>7</sub> = H, alkyl, etc.; m = 1 - 9; n = 0 - 2] are prep'd. I are useful in the treatment and prevention of complications of diabetes and aging. The title compd. II was prep'd. in a multistep process starting with 2,5-dimethylbenzoquinone. II in vitro showed IC<sub>50</sub> of 7.3 .mu.M against lipid peroxidn.

IT 14167-18-1, Salcomine  
 RL: CAT (Catalyst use); USES (Uses)  
 (prep'n. of chromanylideneaminoguanidines and analogs as Maillard reaction-inhibiting antioxidants)  
 IC ICM C07D307-79  
 ICS C07D311-72; C07D405-06  
 ICA A61K031-34; A61K031-35; A61K031-44  
 CC 27-14 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 1, 63  
 ST chromanylideneaminoguanidine prep'n Maillard reaction inhibitor

antioxidant; diabetes complication treatment  
chromanylidenaminoguanidine prepn; aging treatment  
chromanylidenaminoguanidine prepn

IT **Antioxidants**

Maillard reaction

(prepn. of chromanylidenaminoguanidines and analogs as Maillard reaction-inhibiting antioxidants)

IT 171967-93-4P 171967-94-5P 171967-95-6P 171967-96-7P 171967-97-8P  
171967-98-9P 171967-99-0P 171968-00-6P 171968-01-7P 171968-02-8P  
171968-03-9P 171968-04-0P 171968-05-1P 171968-06-2P 171968-07-3P  
171968-08-4P 171968-09-5P 171968-10-8P 171968-11-9P 171968-12-0P  
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of chromanylidenaminoguanidines and analogs as Maillard reaction-inhibiting antioxidants)

IT **14167-18-1, Salcomine**

RL: CAT (Catalyst use); USES (Uses)

(prepn. of chromanylidenaminoguanidines and analogs as Maillard reaction-inhibiting antioxidants)

IT 74-88-4, Methyl iodide, reactions 95-87-4, 2,5-Dimethylphenol  
107-30-2, Chloromethyl methyl ether 108-24-7, Acetic anhydride  
108-30-5, Succinic anhydride, reactions 124-40-3, Dimethylamine,  
reactions 137-18-8, 2,5-Dimethylbenzoquinone 150-78-7,  
1,4-Dimethoxybenzene 526-86-3, 2,3-Dimethylbenzoquinone 527-61-7,  
3,5-Dimethylbenzoquinone 556-82-1, 3-Methyl-2-buten-1-ol 563-47-3,  
3-Chloro-2-methylpropene 867-13-0, Ethyl diethylphosphonoacetate  
1253-46-9, (4-Methoxycarbonylbenzyl)triphenylphosphonium bromide  
1937-19-5, Aminoguanidine hydrochloride 2605-67-6, Methyl  
(triphenylphosphoranylidene)acetate 3282-30-2, Pivaloyl chloride  
4885-02-3, .alpha.,.alpha.-Dichloromethyl methyl ether 171968-46-0  
RL: RCT (Reactant)

(prepn. of chromanylidenaminoguanidines and analogs as Maillard reaction-inhibiting antioxidants)

IT 615-90-7P 1015-55-0P 1077-69-6P 1083-11-0P 1084-74-8P

## 6133-18-2P

19206-87-2P	26172-17-8P	60404-99-1P	74785-10-7P	78707-88-7P
149467-89-0P	162963-37-3P	162963-39-5P	162963-41-9P	170728-04-8P
171968-13-1P	171968-14-2P	171968-15-3P	171968-16-4P	171968-17-5P
171968-18-6P	171968-19-7P	171968-20-0P	171968-21-1P	171968-22-2P
171968-23-3P	171968-24-4P	171968-25-5P	171968-26-6P	171968-27-7P
171968-28-8P	171968-29-9P	171968-30-2P	171968-31-3P	171968-32-4P
171968-33-5P	171968-34-6P	171968-35-7P	171968-36-8P	171968-37-9P
171968-38-0P	171968-39-1P	171968-40-4P	171968-41-5P	171968-42-6P
171968-43-7P	171968-44-8P	171968-45-9P		

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of chromanylidenaminoguanidines and analogs as Maillard reaction-inhibiting antioxidants)

IT **14167-18-1, Salcomine**

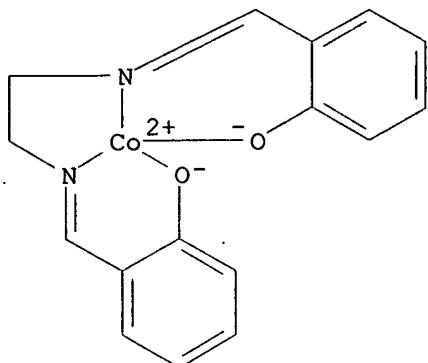
RL: CAT (Catalyst use); USES (Uses)

(prepn. of chromanylidenaminoguanidines and analogs as Maillard reaction-inhibiting antioxidants)

RN 14167-18-1 CAPLUS

CN Cobalt,

[[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 8 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1995:708425 CAPLUS

DN 123:85859

TI Method for improving the stability of dyeings on hydrophobic fibers, its use on polyamide and polyester fibers and treated textiles from

IN Schlenker, Wolfgang; Strahm, Ulrich; Fuso, Francesco

PA Ciba-Geigy A.-G., Switz.

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4429470	A1	19950302	DE 94-4429470	19940819
PRAI CH 93-2500		19930823		

OS MARPAT 123:85859

AB Title method comprises treating the dyed textile with a fiber stabilizer, e.g., **antioxidants** or light stabilizers, in supercrit. CO<sub>2</sub>. A striped polyester textile was treated with 2,4-diphenyl-6-(2-hydroxy-4-methoxyphenyl)-1,3,5-triazine (I) in supercrit. CO<sub>2</sub> in an autoclave at 130.degree. and 250 bar for 30 min to give 75% exhaustion of I.

IT 14167-15-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(light stabilizer; in improving the stability of dyeings on hydrophobic fibers)

IC ICM D06P005-04

ICA D06P005-06; D06P005-10

CC 40-6 (Textiles and Fibers)

ST light stabilizer supercrit carbon dioxide textile; dyeing stability supercrit carbon dioxide; **antioxidant** supercrit carbon dioxide textile dyeing; polyester fiber dyeing stability; polyamide fiber dyeing stability

IT **Antioxidants**

Light stabilizers

(in improving the stability of dyeings on hydrophobic fibers)

IT 14167-15-8 52829-07-9 106556-36-9

RL: TEM (Technical or engineered material use); USES (Uses)  
(light stabilizer; in improving the stability of dyeings on hydrophobic

fibers)

IT 14167-15-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(light stabilizer; in improving the stability of dyeings on

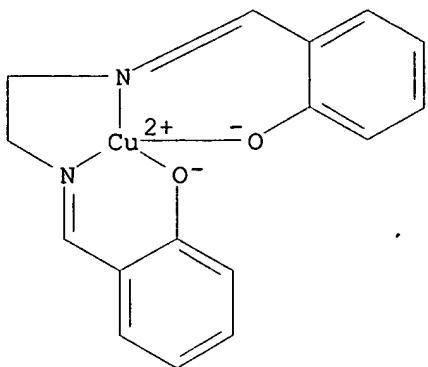
hydrophobic

fibers)

RN 14167-15-8 CAPLUS

CN Copper,

[[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 9 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1995:209409 CAPLUS

DN 122:46423

TI Preparation and characterization of Mn-salophen complex with superoxide scavenging activity

AU Liu, Zheng-Xian; Robinson, Gina B.; Gregory, Eugene M.

CS Department of Biochemistry and Anaerobic Microbiology, Virginia Polytechnic Institute, VA, 24061-0308, USA

SO Arch. Biochem. Biophys. (1994), 315(1), 74-81  
CODEN: ABBIA4; ISSN: 0003-9861

DT Journal

LA English

AB Mn(III)-salophen complex with superoxide scavenging activity was prep'd. from manganese(III) acetate dihydrate and salophen in ethanol. Visible absorption spectrum of the red-brown complex exhibits a shoulder at 430 nm

which was absent with either salophen or manganic acetate alone. Titration of salophen with manganese(III) is consistent with a 1:1 Mn to salophen stoichiometry of the complex based on changes in the absorbance at 500 nm or of superoxide scavenging activity. The superoxide dismutase (SOD)-like

activity of the complex in the xanthine-xanthine oxidase/cytochrome c assay was 1450 units/mg salophen. The SOD activity of the complex was suppressed 50% in the presence of EDTA (1 mM), but was not altered in the presence of bovine serum albumin (1 mg/mL) or crude protein ext. of Escherichia coli QC779 sodA-sodB- (1 mg/mL). E. coli QC779 sodA-sodB-grew scantily after an 8-h lag phase in aerobic M63 glucose minimal medium. The aerobic growth of the E. coli SOD double mutant in glucose minimal medium was greatly enhanced in the presence of 5 or 10  $\mu\text{M}$

Mn-salophen complex compared to that of control after 24 h incubation. Mn-desferal green complex (10 .mu.M) and pink complex (5 .mu.M) also increased growth rate of E. coli QC779 sodA-sodB- but to a lesser extent than Mn-salophen complex. However, the growth was completely inhibited by 50 .mu.M Mn-salophen complex, 100 .mu.M Mn-desferal green complex, or 10 .mu.M Mn-desferal pink complex.

IT 100183-26-4P  
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(prepn. and characterization of Mn-salophen complex with superoxide scavenging activity)

CC 1-12 (Pharmacology)

IT Antioxidants  
(prepn. and characterization of Mn-salophen complex with superoxide scavenging activity)

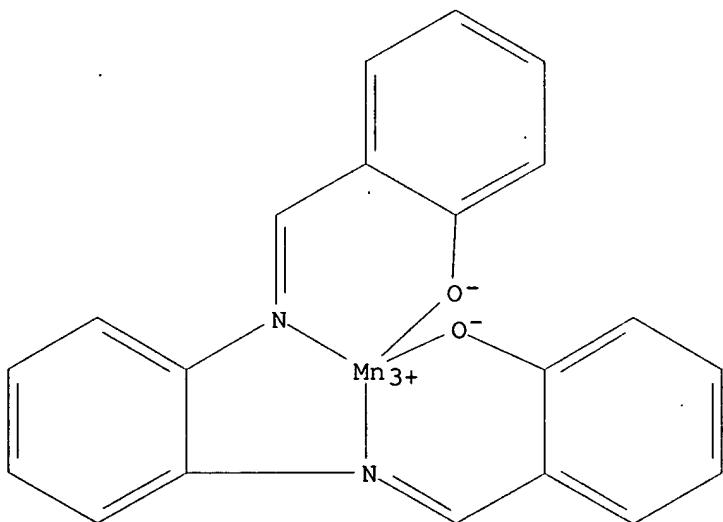
IT 100183-26-4P  
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(prepn. and characterization of Mn-salophen complex with superoxide scavenging activity)

IT 100183-26-4P  
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(prepn. and characterization of Mn-salophen complex with superoxide scavenging activity)

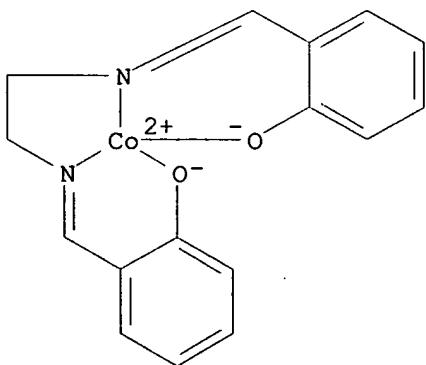
RN 100183-26-4 CAPLUS

CN Manganese(1+), [[2,2'-(1,2-phenylenebis[(nitrilo-.kappa.N)methylidyne])bis[phenolato-.kappa.O]](2-)]-, (SP-4-2)- (9CI)

(CA INDEX NAME)



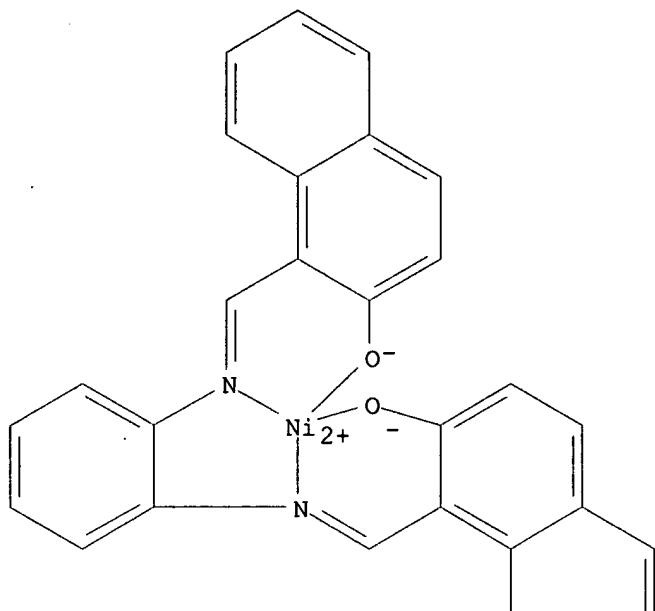
DN 122:23297  
 TI Antioxidant activity of chlorophyll derivatives: measurement by Cypridina chemiluminescence method.  
 AU Suzuki, N.; Nakamura, K.; Namiki, M.; Nomoto, T.; Yoda, B.; Saeki, A.  
 CS Shimonoseki Univ. Fisheries, Yoshimi, 759-65, Japan  
 SO Chem. Funct. Dyes, Proc. Int. Symp., 2nd (1993), Meeting Date 1992, 130-5.  
     Editor(s): Yoshida, Z.; Shirota, Y. Publisher: Mita Press, Tokyo, Japan.  
     CODEN: 59TQAX  
 DT Conference  
 LA English  
 AB Several metallochlorophyllins and chlorins showed antioxidant activity to superoxide in aq. soln., as detd. by the Cypridina chemiluminescence method (Suzuki, N., et al., 1991). The compds. are potential agents for oxidative stress relief in cancer patients.  
 IT 14167-18-1, Salcomin  
     RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
         (antioxidant activity of chlorophyll derivs. to superoxide)  
 CC 1-6 (Pharmacology)  
 ST antioxidant chlorophyll deriv oxidative stress cancer  
 IT Antioxidants  
     (antioxidant activity of chlorophyll derivs. to superoxide)  
 IT Neoplasm inhibitors  
     (chlorophyll deriv. antioxidants for oxidative stress relief)  
 IT 11006-34-1 14167-18-1, Salcomin 69138-22-3 72984-36-2  
     100111-78-2 152695-46-0 159602-67-2 159602-68-3 159602-69-4  
     159602-70-7  
     RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
         (antioxidant activity of chlorophyll derivs. to superoxide)  
 IT 14167-18-1, Salcomin  
     RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
         (antioxidant activity of chlorophyll derivs. to superoxide)  
 RN 14167-18-1 CAPLUS  
 CN Cobalt,  
 [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



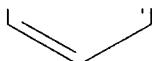
L12 ANSWER 11 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1994:511398 CAPLUS  
 DN 121:111398  
 TI Polyolefin stabilization against UV light  
 IN Walters, John Phillip  
 PA Phillips Petroleum Co., USA  
 SO Eur. Pat. Appl., 30 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 567117	A1	19931027	EP 93-106550	19930422
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	US 5310771	A	19940510	US 92-872863	19920423
	JP 06016875	A2	19940125	JP 93-96190	19930422
PRAI	US 92-872863		19920423		
OS	MARPAT	121:111398			
AB	Polyolefins, esp. pigmented fibers, are stabilized against UV light by incorporation of a hindered amine, a metal phosphonate, and optionally, a phenolic antioxidant and an org. phosphite. Thus, polypropylene fibers contg. C.I. Pigment Blue 15:1, Irgastab 2002 (I, a Ni phosphonate), and GR-3150 [2,4,6-tris[N-cyclohexyl-N-[2-(3,3,5,5-tetramethylpiperazinonyl)ethyl]]-s-triazine] exhibited significantly less degrdn. in fadometer at 89.degree. and relative humidity 50% than similar fibers not contg. I.				
IT	20437-10-9, C.I. Pigment Orange 65				
	RL: USES (Uses)	(polypropylene fibers pigmented by, light stabilizers for, hindered amine-metal phosphonate mixts. as)			
IC	ICM C08L023-10				
	ICS C08K005-00				
ICI	C08K005-00, C08K005-3462, C08K005-3435, C08K005-3492, C08K005-5333, C08K005-5393				
CC	40-3 (Textiles and Fibers)				
	Section cross-reference(s): 37				
IT	81-33-4, C.I. Pigment Violet 29 147-14-8, C.I. Pigment Blue 15:1 980-26-7, C.I. Pigment Red 122 1047-16-1, C.I. Pigment Violet 19 1309-37-1, C.I. Pigment Red 101, uses 1328-53-6, C.I. Pigment Green 7 1344-37-2, C.I. Pigment Yellow 34 5280-78-4, C.I. Pigment Red 144 5521-31-3, C.I. Pigment Red 179 5590-18-1, C.I. Pigment Yellow 110 6358-30-1, C.I. Pigment Violet 23 12656-85-8, C.I. Pigment Red 104 13463-67-7, C.I. Pigment White 6, uses 20437-10-9, C.I. Pigment Orange 65				
	RL: USES (Uses)	(polypropylene fibers pigmented by, light stabilizers for, hindered amine-metal phosphonate mixts. as)			
IT	20437-10-9, C.I. Pigment Orange 65				
	RL: USES (Uses)	(polypropylene fibers pigmented by, light stabilizers for, hindered amine-metal phosphonate mixts. as)			
RN	20437-10-9 CAPLUS				
CN	Nickel, [[1,1'-(1,2-phenylenebis[(nitrilo-.kappa.N)methylidyne])bis[2-naphthalenolato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)				

PAGE 1-A



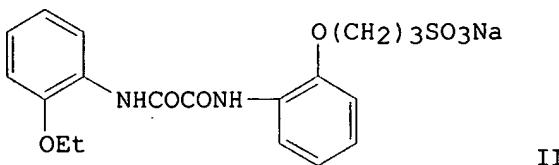
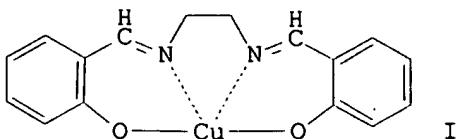
PAGE 2-A



L12 ANSWER 12 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1993:126450 CAPLUS  
 DN 118:126450  
 TI Stabilization of polyamide fibers against heat and light by copper complex  
 compounds and oxalic acid diarylamides  
 IN Kaschig, Juergen; Reinert, Gerhard  
 PA Ciba-Geigy A.-G., Switz.  
 SO Eur. Pat. Appl., 30 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 511166 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE US 5338319 CA 2067059	A1 A AA	19921028 19940816 19921027	EP 92-810286 US 92-870650 CA 92-2067059	19920416 19920420 19920424

BR 9201524	A 19921201	BR 92-1524	19920424
JP 05186969	A2 19930727	JP 92-105104	19920424
PRAI CH 91-1252	19910426		
OS MARPAT 118:126450			
GI			



AB Polyamide fibers are stabilized against heat and light by sulfo group-contg. derivs. of PhNHCOCONHPh and Cu complexes of o-azomethine phenol derivs. showing good affinity for polyamides. Polyamide fibers dyed with a mixt. of Cr complex azo dyes in the presence of I and II showed better lightfastness than similar fibers contg. no I.

IT 14167-15-8P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of, as **antioxidant** for polyamide fibers)

IC ICM D06P001-649

ICS D06P003-24; D06P001-642

CC 40-9 (Textiles and Fibers)

Section cross-reference(s): 25

ST polyamide fiber heat light stabilizer; copper complex **antioxidant**  
polyamide fiber; amide **antioxidant** polyamide fiber; sulfonate  
oxamide deriv stabilizer polyamide

IT Amides, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. and **antioxidant** activity in polyamide fibers)

IT 145233-75-6P 145233-77-8P 145233-78-9P 145233-79-0P 145233-80-3P  
145233-81-4P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. and **antioxidant** activity in polyamide fibers)

IT 14167-15-8P 145233-82-5P 145233-83-6P 145233-84-7P  
145233-85-8P 145233-86-9P 145233-87-0P 145233-88-1P 145233-89-2P

145233-90-5P 145233-91-6P 145233-92-7P 145233-93-8P 145233-94-9P

145233-95-0P 145233-96-1P 145233-97-2P 145233-98-3P 145233-99-4P

145234-00-0P 145234-01-1P 145234-02-2P 145234-03-3P

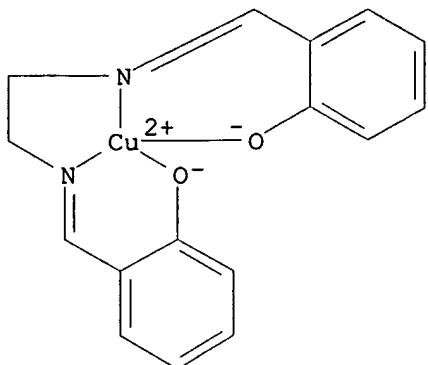
RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of, as **antioxidant** for polyamide fibers)

IT 14167-15-8P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of, as **antioxidant** for polyamide fibers)

RN 14167-15-8 CAPLUS

CN Copper,  
 [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
 lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 13 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1990:531727 CAPLUS

DN 113:131727

TI Preparation of biphenyldiols as materials for resins

IN Kitamura, Taku; Kurokawa, Noriko

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01283241	A2	19891114	JP 88-111553	19880510

OS MARPAT 113:131727

AB Biphenyldiols, also useful as **antioxidants** (no data) and materials for drugs and agrochems., are prep'd. by liq.-phase oxidn. of molten phenols in presence of metal complex catalysts and successive heating without O. Thus, 103.0 g molten 2,6-di-tert-butylphenol (I) was heated with Mn phthalocyanine at 160.degree. under 140 mL/min air for 8 h to give a reaction mixt. contg. 3,3',5,5'-tetra-tert-butyl-4,4'-dihydroxybiphenyl (II) 25.6, 3,3',5,5'-tetra-tert-butyl-4,4'-diphenoxquinone (III) 9.9, and I 62.3%, which was treated continuously without O at 180.degree. for 6 h to give a mixt. contg. II 45.0, III 0.2, and I 52.6%, from which 40.1 g cryst. II was isolated.

IT 14167-18-1 23755-16-0

RL: CAT (Catalyst use); USES (Uses)  
 (catalyst, for liq.-phase oxidative coupling of phenols)

IC ICM C07C039-15

ICS B01J031-22; C07C037-11

ICA C07B061-00

CC 25-10 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 Section cross-reference(s): 1, 35, 41

ST biphenyldiol prep'n resin material; **antioxidant** biphenyldiol prep'n; drug intermediate biphenyldiol prep'n; dye intermediate biphenyldiol

prep; phenol liq phase oxidative coupling; disproportionation phenol diphenoquinone

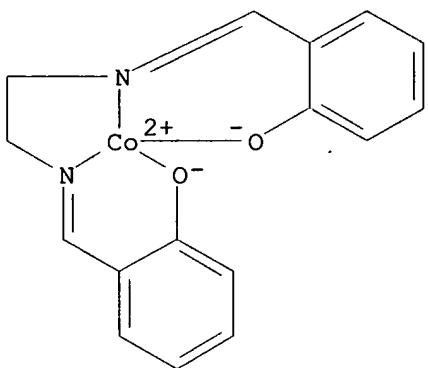
IT **Antioxidants**  
(biphenyldiols)

IT 132-16-1, Iron phthalocyanine 13930-88-6 **14167-18-1**  
14325-24-7, Manganese phthalocyanine 15665-27-7 17632-19-8  
**23755-16-0**  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for liq.-phase oxidative coupling of phenols)

IT **14167-18-1 23755-16-0**  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for liq.-phase oxidative coupling of phenols)

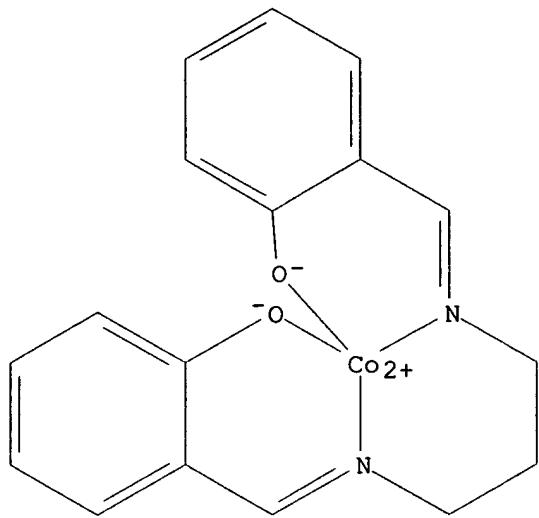
RN 14167-18-1 CAPLUS

CN Cobalt,  
[[2,2'-[1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[pheno  
lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 23755-16-0 CAPLUS

CN Cobalt,  
[[2,2'-[1,3-propanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[phen  
olato-.kappa.O]](2-)]- (9CI) (CA INDEX NAME)



L12 ANSWER 14 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1988:456513 CAPLUS

DN 109:56513

TI Process for the photochemical stabilization of a fibrous polyamide material and its mixtures with other fibers

IN Reinert, Gerhard

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 28 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 255481	A1	19880203	EP 87-810415	19870723
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	US 4874391	A	19891017	US 87-75805	19870720
	DK 8703934	A	19880130	DK 87-3934	19870728
	AU 8776182	A1	19880204	AU 87-76182	19870728
	AU 604730	B2	19910103		
	BR 8703897	A	19880405	BR 87-3897	19870728
	JP 63046262	A2	19880227	JP 87-187883	19870729
	JP 03064554	B4	19911007		

PRAI CH 86-3034 19860729

OS MARPAT 109:56513

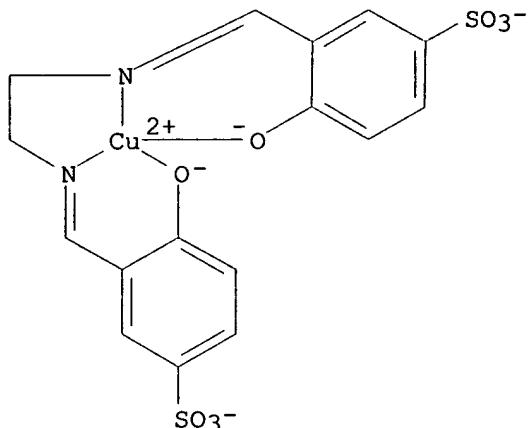
AB The lightfastness and tear strength of polyamide fibers are increased by treating them with mixts. of  $\text{H}_2\text{O}$ -sol. Cu complex dyes, light stabilizers, and, optionally, antioxidants. A nylon 66 fabric dyed in a bath contg. 1 g/L  $(\text{NH}_4)_2\text{SO}_4$ , 0.043% 1:2 Cr-azo dye complex, and 0.063% 1:1 Cu azo dye complex had lightfastness (DIN 75.202) 6 and tenacity and elongation after lightfastness testing (150 h) 30.5 and 45.6%, resp., vs. 6, 9.0, and 14.7, resp., when dyed with Co complex dyes only.

IT 70882-93-8 115402-47-6

RL: USES (Uses)

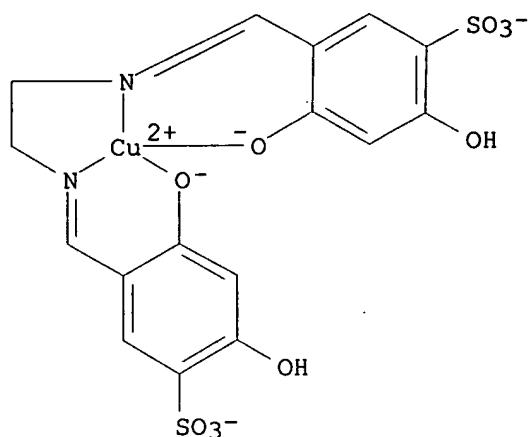
(light stabilizers, for polyamide fibers in dyeing)

IC ICM D06P003-24  
 ICS D06P001-62; D06P001-64; D06P001-653; D06P001-667; D06M013-10;  
 D06M013-26; D06M013-34  
 CC 40-6 (Textiles and Fibers)  
 Section cross-reference(s): 41  
 IT 117-99-7D, 2-Hydroxybenzophenone, derivs. 14363-26-9 20170-32-5D,  
 esters with polyols 52829-07-9, Bis(2,2,6,6-tetramethyl-4-  
 piperidinyl)sebacate 59261-49-3 66165-37-5 70882-93-8  
 92484-54-3 101196-79-6 103193-42-6 115402-47-6  
 RL: USES (Uses)  
 (light stabilizers, for polyamide fibers in dyeing)  
 IT 70882-93-8 115402-47-6  
 RL: USES (Uses)  
 (light stabilizers, for polyamide fibers in dyeing)  
 RN 70882-93-8 CAPLUS  
 CN Cuprate(2-), [[3,3'-(1,2-ethanediylbis(nitrilomethylidyne)]bis[4-  
 hydroxybenzenesulfonato]](4-)N3,N3',O4,O4']-, disodium, (SP-4-2)- (9CI)  
 (CA INDEX NAME)



● 2  $\text{Na}^+$

RN 115402-47-6 CAPLUS  
 CN Cuprate(2-), [[3,3'-(1,2-ethanediylbis(nitrilomethylidyne)]bis[4,6-  
 dihydroxybenzenesulfonato]](4-)N3,N3',O4,O4']-, disodium (9CI) (CA  
 INDEX  
 NAME)



• 2 Na<sup>+</sup>

L12 ANSWER 15 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1988:133369 CAPLUS

DN 108:133369

TI Process for the photochemical stabilization of undyed and dyed fibrous polyamide material and its mixture with other fibers

IN Reinert, Gerhard; Burdeska, Kurt

PA Ciba-Geigy A.-G. , Switz.

SO Eur. Pat. Appl., 49 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 245204	A1	19871111	EP 87-810272	19870429
	EP 245204	B1	19930804		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, SE				
	US 4775386	A	19881004	US 87-42771	19870427
	AT 92552	E	19930815	AT 87-810272	19870429
	ES 2058136	T3	19941101	ES 87-810272	19870429
	AU 8772472	A1	19871112	AU 87-72472	19870504
	AU 599649	B2	19900726		
	ZA 8703171	A	19871230	ZA 87-3171	19870504
	BR 8702227	A	19880217	BR 87-2227	19870504
	JP 62267367	A2	19871120	JP 87-110405	19870506
	JP 04011589	B4	19920228		

PRAI CH 86-1826 19860505  
CH 86-5057 19861218  
EP 87-810272 19870429

AB In the title process, giving improved fastness and tenacity, the fibers are treated with mixts. of org. Cu complexes, light stabilizers, and optionally **antioxidants**. Nylon 66 staple yarn dyed olive-green in a dye bath contg. 0.04% (based on yarn) 1:1 Cu complex with the 2:1

imine of salicylaldehyde with ethylenediamine and 1% 2-benzotriazol-2-yl-4-methylphenol had Xenotest lightfastness (Swiss std. SN-ISO 105-B02) 7 and tenacity retention 71.2 and elongation retention 61.3% after 750 h Xenotest exposure; vs. 7, 64.5, and 56.7, resp., without the chelate, 6-7, 69.4, and 64.2, resp., without the phenol, and 6-7, 49.7, and 51.2, resp., with neither.

IT 13928-30-8 14167-15-8 70882-93-8

RL: USES (Uses)  
(light stabilizers, for dyed and undyed polyamide fibers)

IC ICM D06P003-24

ICS D06P001-62; D06P001-64; D06P001-667; D06P005-02; D06M013-50; D06M013-34; D06M013-28; D06M013-10

CC 40-9 (Textiles and Fibers)

IT 2440-22-4 3121-60-6 13928-30-8 14167-15-8

14363-26-9 23128-74-7 52829-07-9 57877-92-6 59261-49-3  
70882-93-8 92484-54-3 101196-77-4 101196-79-6 103193-42-6  
113644-20-5

RL: USES (Uses)

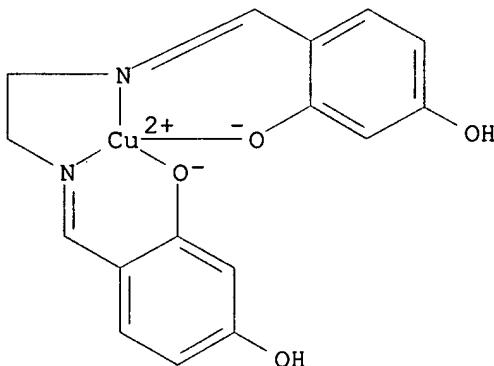
(light stabilizers, for dyed and undyed polyamide fibers)

IT 13928-30-8 14167-15-8 70882-93-8

RL: USES (Uses)  
(light stabilizers, for dyed and undyed polyamide fibers)

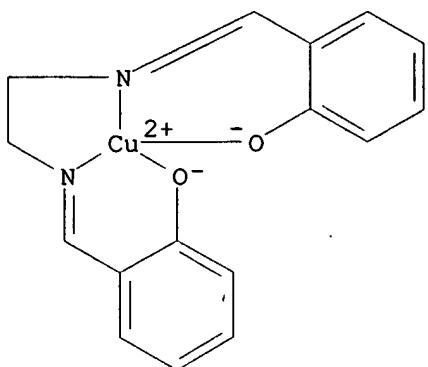
RN 13928-30-8 CAPLUS

CN Copper, [[4,4'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[1,3-benzenediolato-.kappa.O3]](2-)]- (9CI) (CA INDEX NAME)

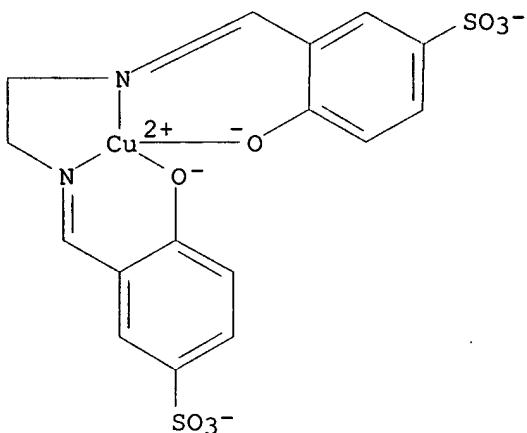


RN 14167-15-8 CAPLUS

CN Copper, [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[phenolato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 70882-93-8 CAPLUS

CN Cuprate(2-), [[3,3'-(1,2-ethanediylbis(nitrilomethylidyne)]bis[4-hydroxybenzenesulfonato](4)-N3,N3',O4,O4']-, disodium, (SP-4-2)-(9CI)  
(CA INDEX NAME)● 2 Na<sup>+</sup>

L12 ANSWER 16 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1987:83273 CAPLUS

DN 106:83273

TI Antioxidants for foods in refrigerators.

IN Fujita, Yuko

PA Japan Storage Battery Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO. DATE

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PI JP 61209041 A2 19860917 JP 85-49747 19850312

AB Bis(salicylaldehydo)ethylenediamine cobalt (II) or its deriv. is placed and sealed in a porous polytetrafluoroethylene bag for use as an antioxidant for foods in refrigerators. Thus, 2 g granules bis(salicylaldehydo)ethylenediamine cobalt (II) was sealed in a polytetrafluoroethylene bag (40% porosity, 0.1 mm thick) to obtain an antioxidant for the foods. For regeneration, the used bag was soaked in 60-100.degree. water or heated with a high frequency-induced elec. heater to remove O.

IT 14167-18-1  
 RL: BIOL (Biological study)  
 (antioxidant, polytetrafluoroethylene bags contg., for foods in refrigeration)

IC ICM B01J020-34  
 ICS B01D053-14

CC 17-6 (Food and Feed Chemistry)

ST antioxidant bissalicylaldehydoethylenediamine cobalt food

IT Food  
 (antioxidants for refrigerated, bis(salicylaldehydo)ethylenediamine cobalt in polytetrafluoroethylene bags as)

IT Refrigerating apparatus  
 (bis(salicylaldehydo)ethylenediamine cobalt in polytetrafluoroethylene bags as antioxidant for foods in)

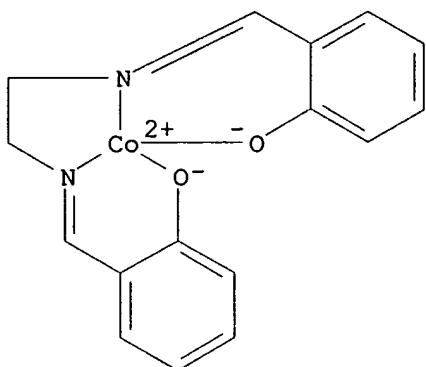
IT Antioxidants  
 (for foods, bis(salicylaldehydo)ethylenediamine cobalt in polytetrafluoroethylene bags as)

IT 14167-18-1  
 RL: BIOL (Biological study)  
 (antioxidant, polytetrafluoroethylene bags contg., for foods in refrigeration)

IT 9002-84-0  
 RL: BIOL (Biological study)  
 (bags, bis(salicylaldehydo)ethylenediamine cobalt in, as antioxidant for food in refrigeration)

IT 14167-18-1  
 RL: BIOL (Biological study)  
 (antioxidant, polytetrafluoroethylene bags contg., for foods in refrigeration)

RN 14167-18-1 CAPLUS  
 CN Cobalt,  
 [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[phenoxy-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 17 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1987:83108 CAPLUS  
 DN 106:83108  
 TI Role of alpha-tocopherol, ascorbic acid, citric acid and EDTA as oxidants in model systems  
 AU Mahoney, John R., Jr.; Graf, Ernst  
 CS Dep. Surg., Univ. Minnesota, Minneapolis, MN, 55455, USA  
 SO J. Food Sci. (1986), 51(5), 1293-6  
 CODEN: JFDSAZ; ISSN: 0022-1147  
 DT Journal  
 LA English  
 AB The effects of 4 widely employed **antioxidants** on Fe mediated hydroxyl radical formation and lipid peroxidn. were studied in aq. model systems. Fe and Cu served as catalysts for the reactions that oxidized ascorbic acid [50-81-7] and .alpha.-tocopherol [59-02-9] and reduced O. Fe<sup>2+</sup> spontaneously reduced O to O<sup>2-</sup> (superoxide anion radical) which led to .bul.OH (hydroxyl radical) and H<sub>2</sub>O<sub>2</sub> generation and lipid peroxidn. Pptn. or sequestration of Fe greatly depressed these oxidative events. Complexation by EDTA [60-00-4] and citric acid [77-92-9], however, formed catalytically active Fe chelates. The concomitant increase in Fe solv. explained the substantial enhancement of Fe-driven redox reactions by EDTA and citric acid.  
 IT 19441-99-7  
 RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
 (oxidn. catalyst activity of, for ascorbic acid and lipids in food models)  
 CC 17-2 (Food and Feed Chemistry)  
 ST prooxidant lipid copper; **antioxidant** iron lipid peroxidn; tocopherol iron lipid oxidn; ascorbate iron lipid oxidn; EDTA iron lipid oxidn; citrate iron lipid oxidn  
 IT Food  
 (antioxidants for, prooxidative effects of, in models)  
 IT Antioxidants  
 (prooxidative effects of, in food models)  
 IT 3269-25-8 7439-89-6D, dildhydroxybenzoate complexes 12706-08-0, Iron (III) EGTA 14836-73-8 15275-07-7, Iron (III) EDTA 16448-54-7  
**19441-99-7** 20438-93-1 23383-11-1 23567-85-3 27138-57-4D,  
 iron complexes 30492-15-0 47379-04-4 51595-41-6  
 RL: BAC (Biological activity or effector, except adverse); BIOL

Delacroix 09/029, 686

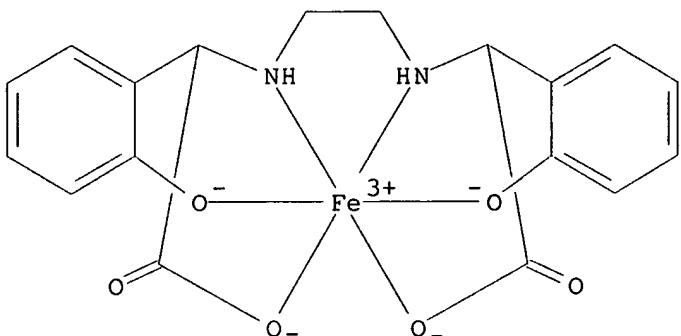
(Biological study)  
(oxidn. catalyst activity of, for ascorbic acid and lipids in food  
models)

IT 19441-99-7

RL: BAC (Biological activity or effector, except adverse); BIOL  
(Biological study)  
(oxidn. catalyst activity of, for ascorbic acid and lipids in food  
models)

RN 19441-99-7 CAPLUS

CN Ferrate(1-), [[:alpha.,.alpha.'-(1,2-ethanediylidimino)bis[2-  
hydroxybenzeneacetato]](4-)]-, hydrogen (9CI) (CA INDEX NAME)



L12 ANSWER 18 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1986:496860 CAPLUS

DN 105:96860

TI Catalysis of chain termination of oxidation of dialkyl sulfides by  
transition metal complexes

AU Kovtun, G. A.; Lysenko, D. L.; Larin, G. M.; Rotov, A. V.; Moiseev, I. I.

CS USSR

SO Dokl. Akad. Nauk SSSR (1986), 287(6), 1418-21 [Phys. Chem.]

CODEN: DANKAS; ISSN: 0002-3264

DT Journal

LA Russian

AB Bis(salicylideneanilinato)copper (I) and bis(salicylidene-p-anisidinato)cobalt inhibited Pr<sub>2</sub>S oxidn. by catalyzing chain termination.  
Both the oxidized and reduced forms of Cu participated in the inhibition process in the case of I.

IT 14167-20-5

RL: PRP (Properties)

(attempted inhibition by, of Pr sulfide oxidn.)

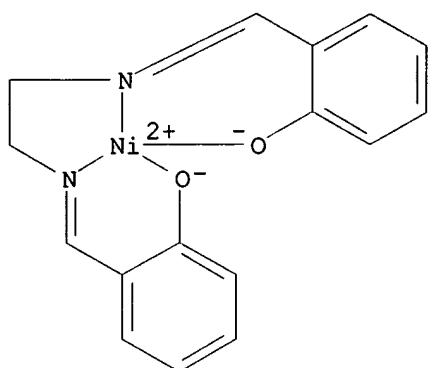
CC 22-7 (Physical Organic Chemistry)

ST antioxidant propyl sulfide metal complex; copper complex  
antioxidant propyl sulfide; cobalt complex antioxidant  
propyl sulfide

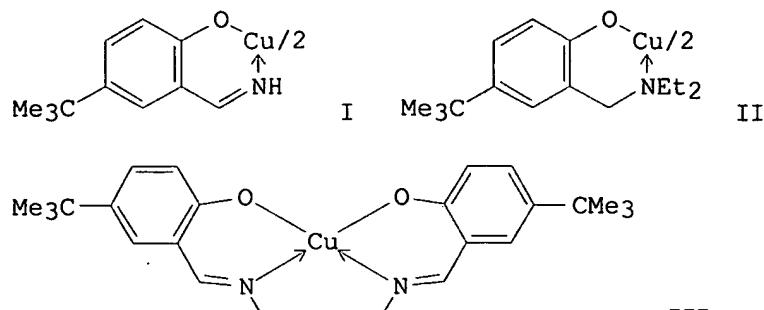
IT Antioxidants

(transition metal complexes, for Pr sulfide)

IT 14363-27-0 14566-16-6  
 RL: PRP (Properties)  
 (antioxidant, for Pr sulfide)  
 IT 122-39-4, uses and miscellaneous 732-26-3  
 RL: USES (Uses)  
 (antioxidant, for Pr sulfide)  
 IT 14167-20-5  
 RL: PRP (Properties)  
 (attempted inhibition by, of Pr sulfide oxidn.)  
 IT 14167-20-5  
 RL: PRP (Properties)  
 (attempted inhibition by, of Pr sulfide oxidn.)  
 RN 14167-20-5 CAPLUS  
 CN Nickel,  
 [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno-  
 lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 19 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1982:180465 CAPLUS  
 DN 96:180465  
 TI Mechanism of inhibition of oxidation reactions by metal complexes. 7.  
 Chain termination by copper complexes with the participation of alkyl and  
 peroxy radicals  
 AU Kovtun, G. A.; Moiseev, I. I.  
 CS Inst. Obshch. Neorg. Khim., Moscow, USSR  
 SO Izv. Akad. Nauk SSSR, Ser. Khim. (1982), (2), 260-5  
 CODEN: IASKA6; ISSN: 0002-3353  
 DT Journal  
 LA Russian  
 GI



AB Kinetic data indicated that chain termination in the oxidn. of pentaerythritol esters of C5-C9 monocarboxylic acids in the presence of I, II, and III involved reactions of alkyl and peroxy radicals with the Cu complexes.

IT 81565-93-7

RL: PRP (Properties)  
(antioxidant, for pentaerythritol esters, mechanism of inhibition by)

CC 22-7 (Physical Organic Chemistry)

ST pentaerythritol ester antioxidant copper complex; alkyl radical reaction copper complex; peroxy radical reaction copper complex

IT Antioxidants

(copper complexes, for pentaerythritol esters, mechanism of inhibition by)

IT 78885-13-9 81565-92-6 81565-93-7

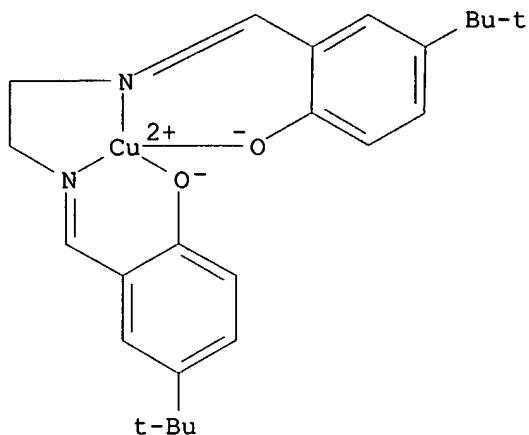
RL: PRP (Properties)  
(antioxidant, for pentaerythritol esters, mechanism of inhibition by)

IT 81565-93-7

RL: PRP (Properties)  
(antioxidant, for pentaerythritol esters, mechanism of inhibition by)

RN 81565-93-7 CAPLUS

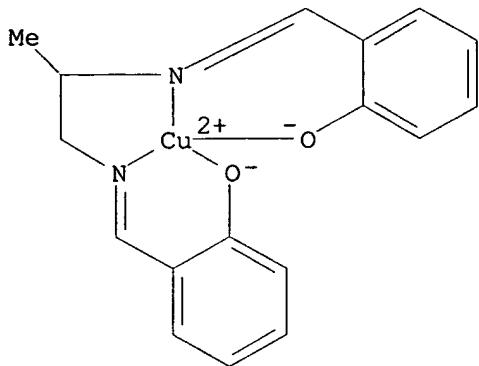
CN Copper, [(2,2'-(1,2-ethanediylbis(nitrilomethylidyne)]bis[4-(1,1-dimethylethyl)phenolato](2--N,N',O,O')- (9CI) (CA INDEX NAME)



L12 ANSWER 20 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1981:409750 CAPLUS  
 DN 95:9750  
 TI Oil for use in automobile engines and transmissions  
 IN Gimpirea, Marin; Herdan, Jean Michel  
 PA Institutul de Cercetari si Proiectari Tehnologice pentru Rafinarii si  
 Instalatii Petrochimice, Rom.  
 SO Rom., 3 pp.  
 CODEN: RUXXA3  
 DT Patent  
 LA Romanian  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RO 67396	B	19790616	RO 75-83619	19751016
AB	Lubricating oils for automobile engines and mech. and hydraulic transmissions comprise SAE 20 base oil (contg. paraffins, naphthenes and naphthenes-paraffins), polymethacrylate (I) pour point depressant and viscosity index improver 1-4, phenyl-.beta.-naphthylamine (II)				
[135-88-6]	antioxidant 0.1-0.5, Zn dialkyldithiocarbamate (III) antiwear additive 0.1-2.5, overbased Ca sulfonate (IV) dispersant-detergent 2-6,				
S-	and P-contg. extreme-pressure additive 1.5-5, ash-free succinimide (V) dispersant-detergent 1-4, Cu 1,2-disalicylpropylene diamine (VI) [14522-52-2] corrosion inhibitor 0.01-0.1, and silicone antifoam additive 0.002%. Thus, lubricating oil (d <sub>4</sub> 20 0.900, viscosity at 50.degree. 52 cSt, viscosity index 115, flash point 220.degree., contg.				
Ca	0.30, S 0.98, P 0.017, Zn 0.1, and N 0.087%) was obtained by blending				
87.6	kg SAE 20 base oil with I 3, II 0.4, III 1, IV 4, extreme-pressure additive contg. 25-30% S and 1-2% P 3, V 1, VI corrosion inhibitor 0.03, and silicone antifoam 0.002 kg for 0.5-1 h at 60-80.degree..				
IT	<b>14522-52-2</b> RL: USES (Uses) (lubricating oils and transmission fluids contg., for automobiles)				

IC C10M001-001  
 CC 51-7 (Fossil Fuels, Derivatives, and Related Products)  
 IT 79-41-4D, esters, polymers 135-88-6 594-07-0D, dialkyl esters, zinc salts 14522-52-2  
 RL: USES (Uses)  
     (lubricating oils and transmission fluids contg., for automobiles)  
 IT 14522-52-2  
 RL: USES (Uses)  
     (lubricating oils and transmission fluids contg., for automobiles)  
 RN 14522-52-2 CAPLUS  
 CN Copper, [(2,2'-([(1R)-1-methyl-1,2-ethanediyl]bis[(nitrilo-.kappa.N)methylidyne]]bis[phenolato-.kappa.O])](2-)]-, (SP-4-4)- (9CI)  
 (CA INDEX NAME)

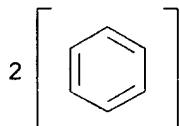


L12 ANSWER 21 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1981:158081 CAPLUS  
 DN 94:158081  
 TI Light stabilization of thermoplastic elastomers  
 AU Kovshov, Yu. S.; Moiseev, V. V.; Zharkikh, T. P.; Safonova, V. P.  
 CS Voronezh. Filial, Vses. Nauchno-Issled. Inst. Sint. Kauch., Voronezh,  
 USSR  
 SO Prom-st. Sint. Kauch. (1980), (12), 17-20  
 CODEN: PSKAD6  
 DT Journal  
 LA Russian  
 AB Of the 19 **antioxidants** and light stabilizers tested with DST-30 and DMST-30 thermoplastic elastomers, 2-(2-hydroxy-5-methylphenyl)benzotriazole (Tinuvin P) (I) [2440-22-4], N,N'-bis(2,2,6,6-tetramethyl-4-piperidyl)ethylenediamine [61260-54-6], Tinuvin 328 [25973-55-1], and Ni-contg. compds., e.g., nickel stearate [2223-95-2], nickel diethyldithiocarbamate [14267-17-5], N,N'-bis(2-hydroxy-4-methoxyphenylbenzylidene)ethylenediamine nickel complex [77110-56-6], diphenylsilanediol nickel salt [77077-11-3], and oxalic acid p-methoxyanilide nickel salt [77077-12-4]. The effectiveness of I can be increased nearly 2-fold by addn. of EV-1 wax. In all cases, the Ni-contg. compds. were more effective than 2,4-dihydroxybenzophenone. Although the stabilizers increased the light resistance of the thermoplastic elastomers, the abs. light resistance of the stabilized thermoplastic elastomers remained quite low.

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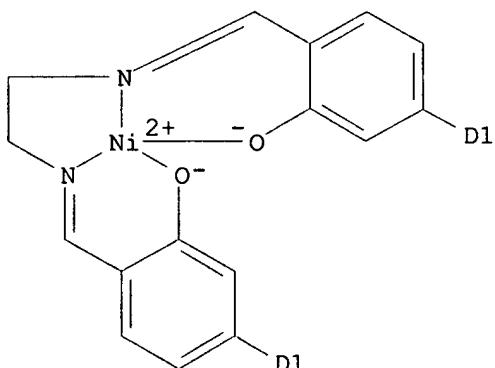
IT 77110-56-6  
RL: USES (Uses)  
(light stabilizers, for thermoplastic elastomers)  
CC 38-9 (Elastomers, Including Natural Rubber)  
IT 2223-95-2 2440-22-4 14267-17-5 25973-55-1 61260-54-6 77077-11-3  
77077-12-4 77110-56-6  
RL: USES (Uses)  
(light stabilizers, for thermoplastic elastomers)  
IT 77110-56-6  
RL: USES (Uses)  
(light stabilizers, for thermoplastic elastomers)  
RN 77110-56-6 CAPLUS  
CN Nickel, [[4,4''-[1,2-ethanediylbis(nitrilomethylidyne)]bis[ar'-methoxy[1,1'-biphenyl]-3-olato]](2)-N4,N4'',O3,O3'']- (9CI) (CA INDEX NAME)

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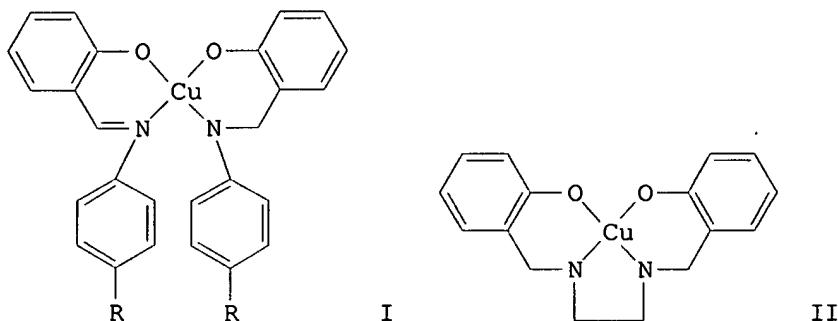
2 ( D1-O-Me )

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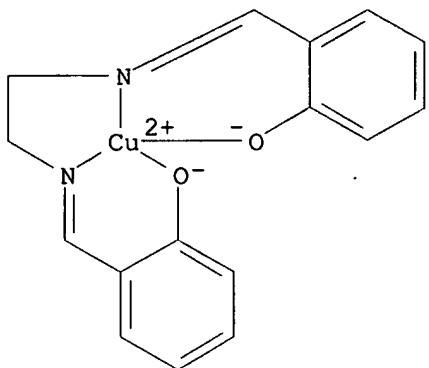
L12 ANSWER 22 OF 29 CAPLUS COPYRIGHT 1999 ACS  
AN 1979:186069 CAPLUS  
DN 90:186069  
TI Mechanism of the inhibition of oxidation reactions by metal complexes.  
2.  
Effect of substituents in the imino component of a Schiff base on the  
antioxidant properties of copper salicylaldiminates  
AU Kovtun, G. A.; Lysenko, D. L.; Berenblyum, A. S.; Moiseev, I. I.

CS Inst. Obshch. Neorg. Khim. im. Kurnakova, Moscow, USSR  
 SO Izv. Akad. Nauk SSSR, Ser. Khim. (1979), (2), 293-7  
 CODEN: IASKA6; ISSN: 0002-3353  
 DT Journal  
 LA Russian  
 GI



AB I ( $R = H, OH, Me, NO_2$ ) and II participated repeatedly in chain terminations (in the oxidn. of cyclohexylamine) via reaction with  $\alpha$ -amino peroxy radicals (III). The rate consts. of single-electron oxidn. and redn. of III decreased with increasing donor character of  $R$ . The rates of chain termination by  $(4-RC_6H_4)_2NH$  increased with increasing donor character of  $R$ .

IT 14167-15-8  
 RL: USES (Uses)  
     (inhibition of cyclohexylamine oxidn by, parameters of)  
 CC 22-5 (Physical Organic Chemistry)  
 ST copper complex antioxidant cyclohexylamine; cyclohexylamine  
     oxidn kinetics inhibition  
 IT 122-39-4, uses and miscellaneous 620-93-9 1821-27-8 6962-04-5  
 14167-15-8 14363-27-0 14688-83-6 14852-50-7 14852-76-7  
 15412-33-6  
 RL: USES (Uses)  
     (inhibition of cyclohexylamine oxidn by, parameters of)  
 IT 14167-15-8  
 RL: USES (Uses)  
     (inhibition of cyclohexylamine oxidn by, parameters of)  
 RN 14167-15-8 CAPLUS  
 CN Copper,  
 [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
     lato-.kappa.O]](2-)], (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 23 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1979:123051 CAPLUS

DN 90:123051

TI Bis(azomethine) pigments

IN Mowat, Douglas

PA Ciba-Geigy A.-G., Switz.

SO Ger. Offen., 21 pp.

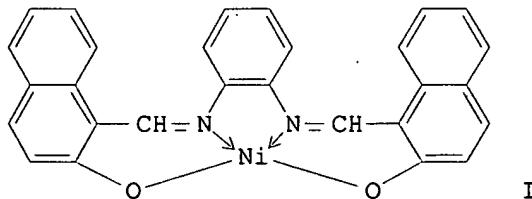
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2823438	A1	19781214	DE 78-2823438	19780529
	GB 1564231	A	19800402	GB 77-22899	19770531
	US 4198345	A	19800415	US 78-908182	19780522
	CA 1111436	A1	19811027	CA 78-304333	19780529
	CH 637418	A	19830729	CH 78-5841	19780529
	JP 53149226	A2	19781226	JP 78-65625	19780531
	FR 2393033	A1	19781229	FR 78-16214	19780531
	FR 2393033	B1	19800606		
PRAI	GB 77-22899		19770531		
GI					



AB Azomethine pigment I [20437-10-9], used for coloring coatings and polyethylene [9002-88-4] fast orange-red shades, is prep'd. by reaction of 2-hydroxy-1-naphthaldehyde (II) [708-06-5] 5.45 with o-phenylenediamine [95-54-5] 3.425 in the presence of antioxidant Na2S2O5 5 kg and a nonionic surfactant in H2O at 20-5.degree., heating to

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90.degree., adding nickel nitrate and NH<sub>4</sub>OH, heating, adding 5.5 kg II,  
heating at 95-100.degree., and isolating.

IT 20437-10-9  
RL: USES (Uses)  
(pigment, for coatings and polyethylene, prepn. of)

IC C09B055-00

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST azomethine nickel hydroxynaphthaldehyde pigment; phenylenediamine  
azomethine nickel pigment; **antioxidant** nickel azomethine pigment

IT 7681-57-4  
RL: USES (Uses)  
(**antioxidants**, in prepn. of bisazomethine pigments)

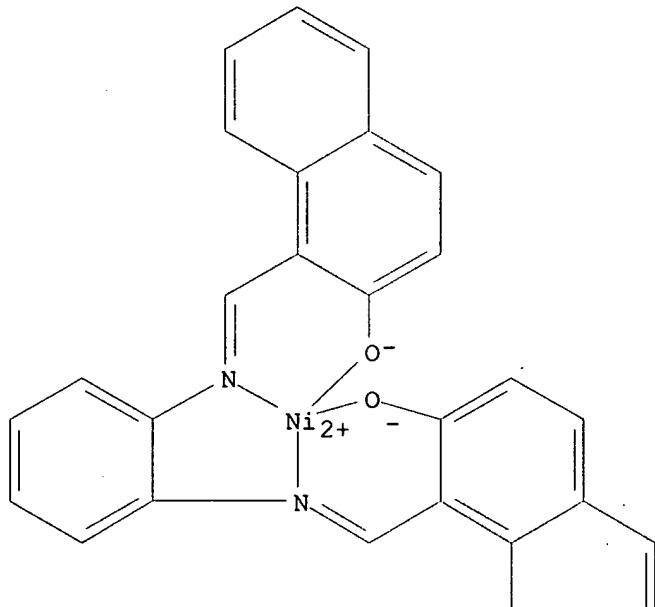
IT 20437-10-9  
RL: USES (Uses)  
(pigment, for coatings and polyethylene, prepn. of)

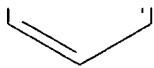
IT 20437-10-9  
RL: USES (Uses)  
(pigment, for coatings and polyethylene, prepn. of)

RN 20437-10-9 CAPLUS

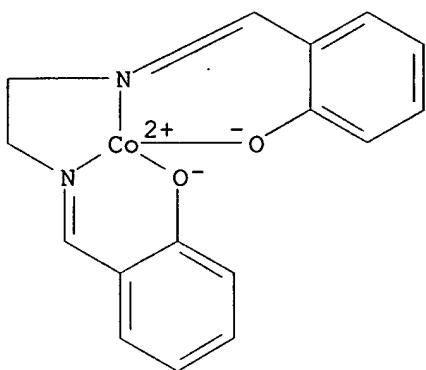
CN Nickel, [[1,1'-(1,2-phenylenebis[(nitrilo-.kappa.N)methylidyne])bis[2-naphthalenolato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)

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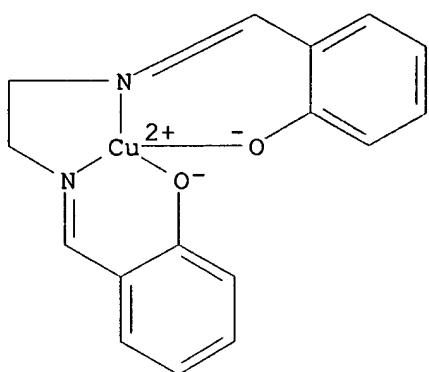




L12 ANSWER 24 OF 29 CAPLUS COPYRIGHT 1999 ACS  
AN 1977:405019 CAPLUS  
DN 87:5019  
TI Inhibition of oxidative induced decomposition of (.alpha..alpha.'-diphenyl)azoethane by transition metal ions. Interactions of metal ions with .alpha.-phenylethylperoxyl radical  
AU Okuma, Kazuhiko; Niki, Etsuo; Kamiya, Yoshio  
CS Dep. React. Chem., Univ. Tokyo, Tokyo, Japan  
SO J. Chem. Soc., Perkin Trans. 2 (1977), (1), 59-64  
CODEN: JCPKBH  
DT Journal  
LA English  
AB MeCHPhN:NCHPhMe (I) decompd. >102 times as fast in the presence of O than in its absence; this oxidative-induced decompn. was suppressed by radical scavengers and transition metal ions in both lower and higher valence states. The effect of the transition metal ions was ascribed to their fast interactions with peroxyl radicals and their stabilization of the latter. At lower metal concns. the induced decompn. was obsd. after a specific suppression time detd. by the ratio of concns. of I to metal ion.  
The effect of ligand and additives such as pyridine and carboxylic acids on the rate and products of the decompn. is discussed.  
IT 14167-18-1  
RL: USES (Uses)  
(inhibitor, for oxidative decompn. of diphenylazoethane)  
CC 22-4 (Physical Organic Chemistry)  
IT Antioxidants  
(transition metal ions, for decompn. of diphenylazoethane)  
IT 7436-86-4 14024-48-7 14024-58-9 14033-48-8 14167-18-1  
14284-89-0 14325-24-7  
RL: USES (Uses)  
(inhibitor, for oxidative decompn. of diphenylazoethane)  
IT 14167-18-1  
RL: USES (Uses)  
(inhibitor, for oxidative decompn. of diphenylazoethane)  
RN 14167-18-1 CAPLUS  
CN Cobalt,  
[[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[pheno lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 25 OF 29 CAPLUS COPYRIGHT 1999 ACS  
 AN 1976:524904 CAPLUS  
 DN 85:124904  
 TI Mechanisms of inhibition against the copper-catalyzed oxidation of polyethylene: structures and catalytic reactivities of copper-inhibitor complexes  
 AU Allara, D. L.; Chan, M. G.  
 CS Bell Lab., Murray Hill, N. J., USA  
 SO J. Polym. Sci., Polym. Chem. Ed. (1976), 14(8), 1857-76  
 CODEN: JPLCAT  
 DT Journal  
 LA English  
 AB The oxidn. rates were detd. for polyethylene [9002-88-4] contg. various copper complexes presumed to form in situ in polyethylene contg. copper salts as inhibitors of copper-catalyzed oxidn. The structure-catalytic activity correlations were studied. The complexes with neg. charged N ligands gave low reactivities; the highest reactivities were shown by Cu20 and air-exposed metallic Cu. The mechanism and kinetics of the inhibition are discussed.  
 IT 14167-15-8  
 RL: USES (Uses)  
 (prepns. of and polyethylene oxidn. kinetics in presence of)  
 CC 36-6 (Plastics Manufacture and Processing)  
 IT Antioxidants  
 (oxamides and other copper-complexing compds., for polyethylene in contact with copper)  
 IT 14167-15-8 27721-61-5 60650-17-1 60749-19-1 60801-62-9  
 60953-61-9 60955-16-0 60955-17-1 60955-18-2 60955-19-3  
 60955-20-6  
 RL: USES (Uses)  
 (prepns. of and polyethylene oxidn. kinetics in presence of)  
 IT 14167-15-8  
 RL: USES (Uses)  
 (prepns. of and polyethylene oxidn. kinetics in presence of)  
 RN 14167-15-8 CAPLUS  
 CN Copper,  
 [[2,2'-(1,2-ethanediylbis[(nitriilo-. $\kappa$ .N)methylidyne])bis[pheno lato-. $\kappa$ .O]](2-)], (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 26 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1976:136642 CAPLUS

DN 84:136642

TI Stabilization of acrylonitrile-styrene-butadiene polymers

IN Szubiries, Ute; Schlimpes, Rolf; Schroeder, Elisabeth

PA E. Ger.

SO Ger. (East), 3 pp.

CODEN: GEXXA8

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 113764	Z	19750620	DD 74-179985	19740718
GI For diagram(s), see printed CA Issue.					
AB The Ni complexes I (R1, R2 = alkyl, aryl or R1 + R2 = hydrocarbylene; R3, R4 = H, alkyl, aryl) are <b>antioxidants</b> and heat stabilizers for ABS polymer [9003-56-9]. Thus, ABS contg. 0.25% <b>antioxidant</b> KS and 0.20% I (R1 + R2 = o-C6H4, R3, R4 = H) [14406-71-4] has tensile strength 366, 354, 330, and 318 kg/cm <sup>2</sup> after 0, 266, 463, and 803 hr, resp., of exposure to sunlight; compared with 366, 246, 280, and 240, resp., with a conventional stabilizer.					
IT 14167-20-5 14406-71-4					
RL: USES (Uses) ( <b>antioxidants</b> and heat stabilizers, for ABS)					
IC C08F; C08D					
CC 36-6 (Plastics Manufacture and Processing)					
ST ABS polymer stabilizer; heat stabilizer ABS; <b>antioxidant</b> ABS polymer; nickel complex stabilizer; salicylaldehyde imine complex nickel; phenylenediamine salicylidene complex nickel					
IT <b>Antioxidants</b> Heat stabilizers (nickel salicylideneimine complexes, for ABS)					
IT 9003-56-9					
RL: USES (Uses) ( <b>antioxidants</b> and heat stabilizers for, nickel complexes as)					
IT 14167-20-5 14406-71-4					
RL: USES (Uses) ( <b>antioxidants</b> and heat stabilizers, for ABS)					

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IT 14167-20-5 14406-71-4

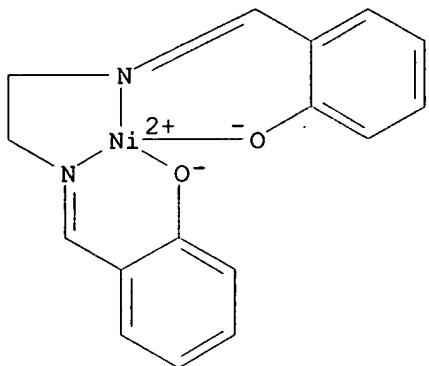
RL: USES (Uses)

(antioxidants and heat stabilizers, for ABS)

RN 14167-20-5 CAPLUS

CN Nickel,

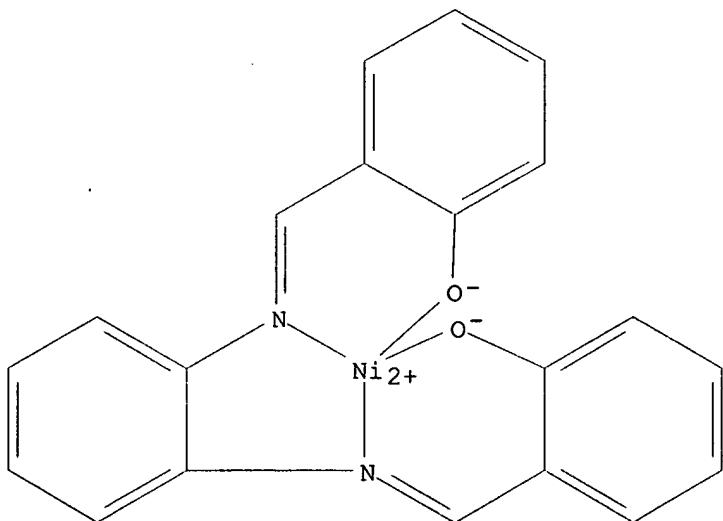
[[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 14406-71-4 CAPLUS

CN Nickel,

[[2,2'-(1,2-phenylenebis[(nitrilo-.kappa.N)methylidyne])bis[phenol  
ato-.kappa.O]](2-)]- (9CI) (CA INDEX NAME)



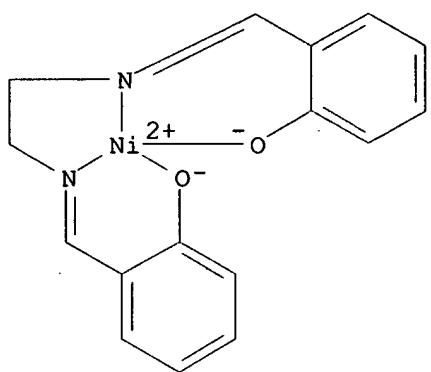
L12 ANSWER 27 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1975:532486 CAPLUS

DN 83:132486

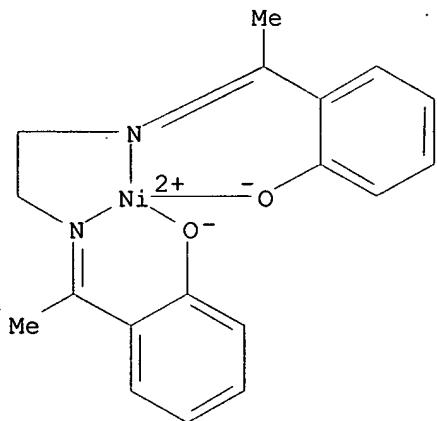
TI Singlet oxygen and polymer photooxidations. II. Photodegradation of an olefinically unsaturated polymer

AU Zweig, A.; Henderson, W. A., Jr.  
 CS Chem. Res. Div., Am. Cyanamid Co., Stamford, Conn., USA  
 SO J. Polym. Sci., Polym. Chem. Ed. (1975), 13(4), 993-1014  
 CODEN: JPLCAT  
 DT Journal  
 LA English  
 AB Ni amino(thiobisphenolate) type chelates were quant. more effective in retarding XT 375 (acrylonitrile-1,3-butadiene-methyl methacrylate-styrene graft copolymer) [9010-94-0] photodegrdn. than were other additives with greater singlet O quenching efficiencies, uv absorption, or radical antioxidant properties. The Ni complexes were relatively stable under photoexposure conditions and were able to quench singlet O and precursor excited states. Fluoranthene [206-44-0] photosensitization of XT 375 was retarded by the Ni chelates.  
 IT 14167-20-5 42532-94-5 55911-89-2  
 RL: USES (Uses)  
     (antioxidant light stabilizers, for acrylic graft polymers)  
 CC 36-6 (Plastics Manufacture and Processing)  
 ST nickel chelate light stabilizer; antioxidant acrylic polymer; mechanism photodegrdn acrylic polymer  
 IT Antioxidants  
     (for acrylic graft polymers)  
 IT Ethanedithione, diphenyl-, nickel complexes  
 RL: USES (Uses)  
     (antioxidant light stabilizers, for acrylic graft polymers)  
 IT Phosphorous acid, triphenyl ester, alkylated  
 RL: USES (Uses)  
     (antioxidants contg., for acrylic polymers)  
 IT 13927-77-0 14167-20-5 14266-60-5 14283-99-9 14363-27-0  
     14516-71-3 14568-00-4 14642-58-1 15170-64-6 15412-63-2  
     15415-93-7 15550-15-9 15711-57-6 15748-52-4 16592-95-3  
     19587-52-1 20649-88-1 21246-17-3 28042-64-0 29666-10-2  
     37025-91-5 37981-00-3 41754-10-3 42532-94-5 42950-64-1  
     42957-85-7 42957-88-0 55911-88-1 55911-89-2 55917-80-1  
     55917-83-4 55917-85-6 55948-34-0 56724-26-6 56725-54-3  
     56725-55-4 56725-56-5 56725-57-6 56725-58-7 56725-59-8  
 RL: USES (Uses)  
     (antioxidant light stabilizers, for acrylic graft polymers)  
 IT 56694-35-0  
 RL: USES (Uses)  
     (antioxidants contg., for acrylic polymers)  
 IT 119-47-1 2082-79-3 6683-19-8 27676-62-6  
 RL: USES (Uses)  
     (antioxidants, for acrylic graft polymers)  
 IT 14167-20-5 42532-94-5 55911-89-2  
 RL: USES (Uses)  
     (antioxidant light stabilizers, for acrylic graft polymers)  
 RN 14167-20-5 CAPLUS  
 CN Nickel,  
 [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
 lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



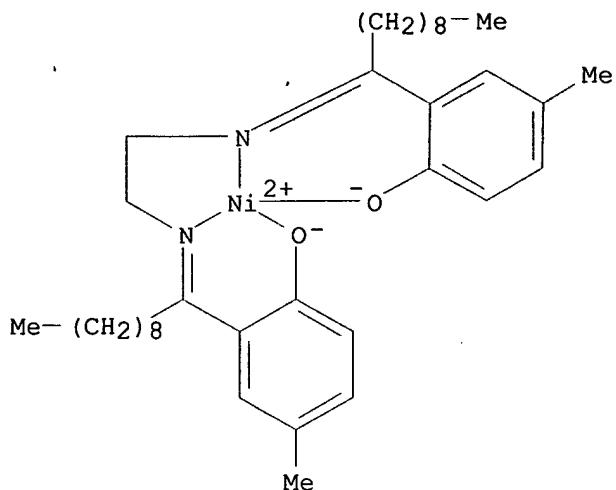
RN 42532-94-5 CAPLUS

CN Nickel, [[2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)ethyliidyne])bis[phenolato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 55911-89-2 CAPLUS

CN Nickel, [[2,2'-(1,2-ethanediylbis(nitrilodecyliidyne))bis[4-methylphenolato]](2-)-N,N1,O,O1]- (9CI) (CA INDEX NAME)



L12 ANSWER 28 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1973:83595 CAPLUS

DN 78:83595

TI Autoxidation of fatty acid esters in the presence of a heavy metal catalyst Salcomine (cobalt[II] bis(salicylalethylenediamine)). I.

**Effect**

of catalyst upon rate of consumption of oxygen and decomposition of hydroperoxide

AU Jarvi, Pentti K.

CS Univ. Helsinki, Helsinki, Finland

SO Lipids (1972), 7(12), 755-61

CODEN: LPDSAP

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB The autoxidn. of fatty acid esters in the presence of a heavy metal chelate, Salcomine (I) was studied. Both **antioxidative** and prooxidative effects were obsd. When the concn. of the catalyst is decreased or the temp. is increased, the induction period becomes shorter and under some conditions disappears. It was shown that the decompn. of hydroperoxides is affected by I; a first order reaction is involved with Arrhenius parameters E = 21 kcal, and A = 8.99 .times. 10<sup>10</sup> sec<sup>-1</sup>. The solubility of O in fatty acid esters above 30.degree., with and without

I, is the same. Theoretical aspects of the reaction mechanism, that are consistent with the exptl. results, are proposed.

IT 14167-18-1

RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for autoxidn. of fatty acid esters)

CC 22-5 (Physical Organic Chemistry)

IT 14167-18-1

RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for autoxidn. of fatty acid esters)

IT 14167-18-1

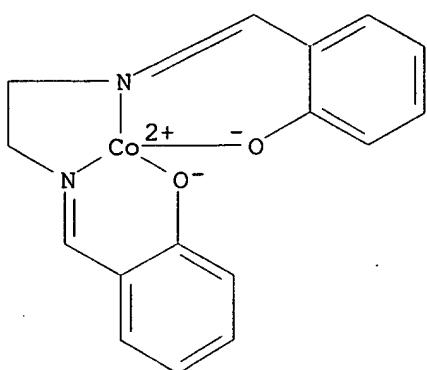
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for autoxidn. of fatty acid esters)

Delacroix 09/029,686

RN 14167-18-1 CAPLUS

CN Cobalt,

[ [2,2'-(1,2-ethanediylbis[(nitrilo-.kappa.N)methylidyne])bis[pheno  
lato-.kappa.O]](2-)]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L12 ANSWER 29 OF 29 CAPLUS COPYRIGHT 1999 ACS

AN 1972:564319 CAPLUS

DN 77:164319

TI Stabilization of nitrosobenzene

IN Dodman, David; Wilkins, Malcolm; Woolley, John Mathers

PA Imperial Chemical Industries Ltd.

SO Ger. Offen., 6 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2207493	A	19720907	DE 72-2207493	19720217
	US 3751490	A	19730807	US 72-220703	19720125

PRAI GB 71-5095 19710222

AB A 20 soln. of PhNO, useful as an intermediate in the manuf. of  
antioxidants and dyes, in PhNO<sub>2</sub> was stabilized by 0.25-1 salts or  
complexes of Co, Cu, Mn, Hg, or Ce. Thus, a 20 soln. of PhNO in Ph-NO<sub>2</sub>  
contg. 0.25 Mn acetate stored in the dark at 20-5.degree. for 7 and 34  
days contained 96.2 and 90.8 of the initial PhNO, resp., vs. 81.6 and  
39.6 without Mn acetate.

IT 36870-54-9

RL: RCT (Reactant)  
(stabilizers, for nitrosobenzene)

IC C07C

CC 26-6 (Condensed Aromatic Compounds)

Section cross-reference(s): 40

IT 638-38-0 1317-38-0, uses and miscellaneous 1600-27-7 7758-89-6  
14284-89-0 19475-87-7 36870-54-9 38845-52-2

RL: RCT (Reactant)  
(stabilizers, for nitrosobenzene)

IT 36870-54-9

RL: RCT (Reactant)

Delacroix 09/029,686

(stabilizers, for nitrosobenzene)  
RN 36870-54-9 CAPLUS

=> d .ca 113 1-7

L13 ANSWER 1 OF 7 CAPLUS COPYRIGHT 1999 ACS  
AN 1998:705968 CAPLUS  
DN 129:326110  
TI Synthetic catalytic free radical scavengers useful as **antioxidants** for prevention and therapy of disease  
IN Malfroy-Camine, Bernard; Doctrow, Susan Robin  
PA Eukarion, Inc., USA  
SO U.S., 51 pp. Cont.-in-part of U.S. 5,403,834.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>US 5827880</u> *	A	19981027	US 95-380731	19950126
	<u>US 5403834</u>	A	19950404	US 92-987474	19921207
→CA	2150937	AA	19940623	CA 93-2150937	19931206
HU	72967	A2	19960628	HU 95-1644	19931206
GB	2305107	A1	19970402	GB 96-21087	19931206
GB	2305107	B2	19970514		
LV	10924	B	19961020	LV 95-158	19950606
US	5696109	A	19971209	US 95-485489	19950607
	<u>US 5834509</u>	A	19981110	US 95-479697	19950607

PRAI US 92-987474 19921207

WO 93-US11857 19931206

GB 94-15050 19940706

US 95-380731 19950126

AB **Antioxidant salen-metal complexes** are provided. Salen-metal complexes having superoxide activity, catalase activity, and/or peroxidase activity, in a form suitable for pharmaceutical administration to treat or

prevent a disease assocd. with cell or tissue damage produced by free radicals such as superoxide, and cosmetic and free radical quenching formulations of salen metal compds. are also disclosed. The *in vitro* superoxide dismutase and catalase activities of the various salen-Mn complexes were tested. Formulations of topical lotions contg. salen-metal

complexes are presented.

IT 53140-26-4 53177-12-1 81065-76-1  
151434-18-3 186299-34-3 186358-92-9  
200485-53-6 200485-54-7 200485-55-8  
200577-45-3 200577-46-4 200577-48-6  
200577-49-7 200577-50-0 215112-77-9  
215112-79-1 215112-83-7 215112-84-8  
215112-85-9D, acylated

RL: BAC (Biological activity or effector, except adverse); BUU

(Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(synthetic catalytic free radical scavengers useful as **antioxidants** for prevention and therapy of disease)

IC ICM A61K031-28  
ICS C07F013-00  
NCL 514492000  
CC 1-12 (Pharmacology)  
Section cross-reference(s): 62, 63  
ST synthetic radical scavenger antioxidant therapy disease  
IT Injury  
(animal tissue; synthetic catalytic free radical scavengers useful as  
antioxidants for prevention and therapy of disease)  
IT Radicals, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(free, scavengers; synthetic catalytic free radical scavengers useful  
as antioxidants for prevention and therapy of disease)  
IT Antioxidants  
Lotions (drug delivery systems)  
Therapy  
(synthetic catalytic free radical scavengers useful as  
antioxidants for prevention and therapy of disease)  
IT 53140-26-4 53177-12-1 81065-76-1  
151434-18-3 186299-34-3 186358-92-9  
200485-53-6 200485-54-7 200485-55-8  
200577-45-3 200577-46-4 200577-48-6  
200577-49-7 200577-50-0 215112-77-9  
215112-79-1 215112-83-7 215112-84-8  
215112-85-9D, acylated  
RL: BAC (Biological activity or effector, except adverse); BUU  
(Biological  
use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(synthetic catalytic free radical scavengers useful as  
antioxidants for prevention and therapy of disease)  
IT 9001-05-2, Catalase 9003-99-0, Peroxidase 9054-89-1, Superoxide  
dismutase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(synthetic catalytic free radical scavengers useful as  
antioxidants for prevention and therapy of disease)

L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 1999 ACS  
AN 1998:53474 CAPLUS  
DN 128:200984  
TI Synthetic combined superoxide dismutase/catalase mimetics are protective  
as a delayed treatment in a rat stroke model: a key role for reactive  
oxygen species in ischemic brain injury  
AU Baker, Keith; Marcus, Catherine Bucay; Huffman, Karl; Kruk, Henry;  
Malfroy, Bernard; Doctrow, Susan R.  
CS Eukarion, Inc., Bedford, MA, USA  
SO J. Pharmacol. Exp. Ther. (1998), 284(1), 215-221  
CODEN: JPETAB; ISSN: 0022-~~3565~~  
PB Williams & Wilkins  
DT Journal  
LA English  
AB Stroke is a severe and prevalent syndrome for which there is a great need  
for treatment, including agents to block the cascade of brain injury that  
occurs in the hours after the onset of ischemia. Reactive oxygen species  
(ROS) have been implicated in this destructive process, but  
antioxidant enzymes such as superoxide dismutase (SOD) have been  
unsatisfactory in exptl. stroke models. This study is an evaluation of

the effectiveness of salen-manganese complexes, a class of synthetic SOD/catalase mimetics, in a rat focal ischemia model involving middle cerebral artery occlusion. The authors focus on EUK-134, a newly reported

salen-manganese complex demonstrated here to have greater catalase and cytoprotective activities and equiv. SOD activity compared with the previously described prototype EUK-8. The administration of EUK-134 at 3 h after middle cerebral artery occlusion significantly reduced brain infarct size, with the highest dose apparently preventing further infarct growth. EUK-8 was also protective but substantially less effective. These findings support a key role for ROS in the cascade of brain injury after stroke, even well after the onset of ischemia. The enhanced activity of EUK-134 suggests that, in particular, hydrogen peroxide contributes significantly to this injury. Overall, this study suggests that synthetic SOD/catalase mimetics might serve as novel,

multifunctional

therapeutic agents for stroke.

IT 81065-76-1P, EUK 134

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthetic combined superoxide dismutase/catalase mimetics are protective in delayed treatment in a rat stroke model and role for reactive oxygen species in ischemic brain injury)

IT 53177-12-1, EUK-8

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(synthetic combined superoxide dismutase/catalase mimetics are protective in delayed treatment in a rat stroke model and role for reactive oxygen species in ischemic brain injury)

CC 1-12 (Pharmacology)

Section cross-reference(s): 14

IT 81065-76-1P, EUK 134

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthetic combined superoxide dismutase/catalase mimetics are protective in delayed treatment in a rat stroke model and role for reactive oxygen species in ischemic brain injury)

IT 53177-12-1, EUK-8

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(synthetic combined superoxide dismutase/catalase mimetics are protective in delayed treatment in a rat stroke model and role for reactive oxygen species in ischemic brain injury)

L13 ANSWER 3 OF 7 CAPLUS COPYRIGHT 1999 ACS

AN 1997:809718 CAPLUS

DN 128:80026

TI Synthetic catalytic free radical scavengers useful as **antioxidants** for prevention and therapy of disease

IN Malfroy-Camine, Bernard; Doctrow, Susan Robin

PA Eukarion, Inc., USA

SO U.S., 62 pp. Cont.-in-part of U.S. Ser. No. 380,731.

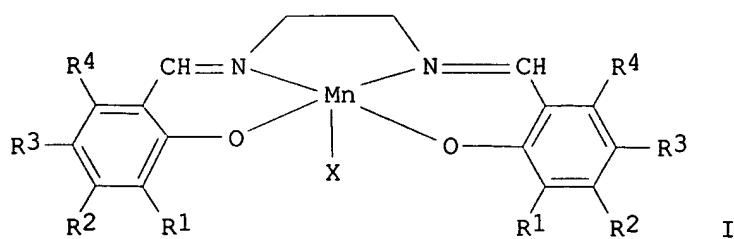
CODEN: USXXAM

DT Patent

LA English

## FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5696109	A	19971209	US 95-485489	19950607
	<del>US 5403834</del>	A	19950404	US 92-987474	19921207
	WO 9413300	A1	19940623	WO 93-US11857	19931206
		W:	AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN		
		RW:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
	GB 2305107	A1	19970402	GB 96-21087	19931206
	GB 2305107	B2	19970514		
	US 5827880	A	19981027	US 95-380731	19950126
	WO 9640148	A1	19961219	WO 96-US10037	19960606
		W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG		
		RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA		
	WO 9640149	A1	19961219	WO 96-US10267	19960606
		W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG		
		RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA		
	CA 2223510	AA	19961219	CA 96-2223510	19960606
	AU 9662725	A1	19961230	AU 96-62725	19960606
	AU 9663328	A1	19961230	AU 96-63328	19960606
	EP 831836	A1	19980401	EP 96-922461	19960606
		R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI		
PRAI	US 92-987474		19921207		
	WO 93-US11857		19931206		
	US 95-380731		19950126		
	GB 94-15050		19940706		
	US 95-485489		19950607		
	WO 96-US10037		19960606		
	WO 96-US10267		19960606		
OS	MARPAT 128:80026				
GI					



AB The invention provides antioxidant salen-metal complexes,

compns. of such **antioxidant** salen-metal complexes having superoxide activity, catalase activity, and/or peroxidase activity, compns. of salen-metal complexes in a form suitable for pharmaceutical administration to treat a disease assocd. with cell or tissue damage produced by free radicals such as superoxide, and cosmetic and free radical quenching formulations of salen metal compds. E.g., in vitro **antioxidant** catalytic activities and pharmaceutical formulations were given for salen metal compds. such as I.

IT 27815-84-5 51436-86-3 53140-26-4  
53177-12-1 81065-76-1 101032-22-8  
135395-84-5 156467-55-9 186299-31-0  
186299-32-1 186299-33-2 186299-34-3  
186299-35-4 186299-36-5 186299-37-6  
186299-38-7 186299-39-8 186299-40-1  
186299-41-2 186299-42-3 186350-25-4  
186358-92-9 200485-52-5 200485-53-6  
200485-54-7 200485-55-8 200485-56-9  
200577-45-3 200577-46-4 200577-47-5  
200577-48-6 200577-49-7 200577-50-0  
200577-51-1 200577-52-2

RL: BAC (Biological activity or effector, except adverse); CAT (Catalyst use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(salen manganese complexes as free radical scavenger  
**antioxidant** catalysts)

IC ICM A61K031-555  
ICS A61K031-28; A61K031-295

NCL 514185000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

ST salen manganese complex **antioxidant** catalyst; radical scavenger  
salen manganese complex

IT **Antioxidants**

Catalysts

Drug delivery systems

Radical scavengers

(salen manganese complexes as free radical scavenger  
**antioxidant** catalysts)

IT 27815-84-5 51436-86-3 53140-26-4  
53177-12-1 81065-76-1 101032-22-8  
135395-84-5 156467-55-9 186299-31-0  
186299-32-1 186299-33-2 186299-34-3  
186299-35-4 186299-36-5 186299-37-6  
186299-38-7 186299-39-8 186299-40-1  
186299-41-2 186299-42-3 186350-25-4  
186358-92-9 200485-52-5 200485-53-6  
200485-54-7 200485-55-8 200485-56-9  
200577-45-3 200577-46-4 200577-47-5  
200577-48-6 200577-49-7 200577-50-0  
200577-51-1 200577-52-2

RL: BAC (Biological activity or effector, except adverse); CAT (Catalyst use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(salen manganese complexes as free radical scavenger  
**antioxidant** catalysts)

AN 1997:130022 CAPLUS  
 DN 126:135623

TI Synthetic catalytic free radical scavengers useful as antioxidants for prevention and therapy of disease

IN Malfroy-Camine, Bernard; Doctrow, Susan Robin  
 PA Eukarion, Inc., USA; Malfroy-Camine, Bernard; Doctrow, Susan Robin  
 SO PCT Int. Appl., 164 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640149	A1	19961219	WO 96-US10267	19960606
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
	US 5696109	A	19971209	US 95-485489	19950607
	AU 9663328	A1	19961230	AU 96-63328	19960606
	EP 831836	A1	19980401	EP 96-922461	19960606
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 95-485489		19950607		
	US 92-987474		19921207		
	WO 93-US11857		19931206		
	US 95-380731		19950126		
	WO 96-US10267		19960606		
OS	MARPAT 126:135623				
AB	The invention provides antioxidant salen-metal complexes, compns. of such antioxidant salen-metal complexes having superoxide, catalase, and/or peroxidase activities, compns. of salen-metal complexes in a form suitable for pharmaceutical administration to treat or prevent a disease assocd. with cell or tissue damage produced by free radicals such as superoxide, and cosmetic and free radical quenching formulations of salen metal compds.				
IT	53177-12-1				
	RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (salen metal complexes as radical scavengers as antioxidants for prevention and therapy of disease)				
IT	14167-15-8 14167-20-5 22967-54-0 27815-84-5 31135-16-7 36913-44-7 38586-93-5 51436-86-3 52594-40-8 53140-26-4 81065-76-1 82405-41-2 95646-99-4 98774-89-1 99568-91-9 122706-84-7 130491-67-7 156467-55-9 186299-31-0 186299-32-1 186299-33-2 186299-34-3 186299-35-4 186299-36-5 186299-37-6 186299-38-7 186299-39-8 186299-40-1 186299-41-2 186299-42-3 186299-43-4 186299-44-5 186299-46-7 186350-25-4 186350-26-5 186350-27-6				

186350-28-7 186350-29-8 186350-30-1  
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186350-34-5 186350-35-6 186350-36-7  
186350-37-8 186350-38-9 186350-39-0  
186350-40-3 186350-41-4 186350-42-5  
186350-43-6 186350-44-7 186350-45-8  
186358-92-9  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(salen metal complexes as radical scavengers as **antioxidants**  
for prevention and therapy of disease)

IC ICM A61K031-555  
ICS A61K031-28; A61K031-295  
CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1  
ST salen metal complex **antioxidant** therapy; radical scavenger salen  
metal complex  
IT **Antioxidants**  
Drug delivery systems  
Radical scavengers  
(salen metal complexes as radical scavengers as **antioxidants**  
for prevention and therapy of disease)  
IT 9001-05-2, Catalase 9003-99-0, Peroxidase 9054-89-1, Superoxide  
dismutase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(activity; salen metal complexes as radical scavengers as  
**antioxidants** for prevention and therapy of disease)  
IT 53177-12-1  
RL: BAC (Biological activity or effector, except adverse); THU  
(Therapeutic use); BIOL (Biological study); USES (Uses)  
(salen metal complexes as radical scavengers as **antioxidants**  
for prevention and therapy of disease)  
IT 14167-15-8 14167-20-5 14167-22-7 19362-14-2  
21044-46-2 21044-47-3 22967-54-0 27815-84-5  
31135-16-7 35820-09-8 36913-44-7 38586-93-5  
51436-86-3 52594-40-8 53140-26-4 57891-46-0  
81065-76-1 82405-41-2 95646-99-4  
98774-89-1 99568-91-9 122706-84-7  
130491-67-7 156467-55-9 186299-31-0  
186299-32-1 186299-33-2 186299-34-3  
186299-35-4 186299-36-5 186299-37-6  
186299-38-7 186299-39-8 186299-40-1  
186299-41-2 186299-42-3 186299-43-4  
186299-44-5 186299-46-7 186350-25-4  
186350-26-5 186350-27-6 186350-28-7  
186350-29-8 186350-30-1 186350-31-2  
186350-32-3 186350-33-4 186350-34-5  
186350-35-6 186350-36-7 186350-37-8  
186350-38-9 186350-39-0 186350-40-3  
186350-41-4 186350-42-5 186350-43-6  
186350-44-7 186350-45-8 186358-92-9  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(salen metal complexes as radical scavengers as **antioxidants**  
for prevention and therapy of disease)

L13 ANSWER 5 OF 7 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:121374 CAPLUS  
DN 126:135622

TI Synthetic catalytic free radical scavengers useful as **antioxidants**  
 for prevention and therapy of disease  
 IN Malfroy-Camine, Bernard; Doctrow, Susan Robin  
 PA Eukarion, Inc., USA; Malfroy-Camine, Bernard; Doctrow, Susan Robin  
 SO PCT Int. Appl., 131 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640148	A1	19961219	WO 96-US10037	19960606
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
	US 5696109	A	19971209	US 95-485489	19950607
	AU 9662725	A1	19961230	AU 96-62725	19960606
PRAI	US 95-485489		19950607		
	US 92-987474		19921207		
	WO 93-US11857		19931206		
	US 95-380731		19950126		
	WO 96-US10037		19960606		
OS	MARPAT 126:135622				
AB	The invention provides <b>antioxidant</b> salen-metal complexes, compns. of such <b>antioxidant</b> salen-metal complexes having superoxide activity, catalase activity, and/or peroxidase activity, compns. of salen-metal complexes in a form suitable for pharmaceutical administration to treat or prevent a disease assocd. with cell or tissue damage produced by free radicals such as superoxide, and cosmetic and free radical quenching formulations of salen metal compds.				
IT	53177-12-1				
	RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (salen-metal complexes as catalytic free radical scavengers useful as <b>antioxidants</b> for prevention and therapy of disease)				
IT	27815-84-5 51436-86-3 53140-26-4 81065-76-1 156467-55-9 186299-31-0 186299-32-1 186299-33-2 186299-34-3 186299-35-4 186299-36-5 186299-37-6 186299-38-7 186299-39-8 186299-40-1 186299-41-2 186299-42-3 186299-43-4 186299-44-5 186299-45-6 186299-46-7 186358-92-9				
	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (salen-metal complexes as catalytic free radical scavengers useful as <b>antioxidants</b> for prevention and therapy of disease)				
IC	ICM A61K031-555				
CC	ICS A61K031-28; A61K031-295				
CC	63-6 (Pharmaceuticals)				
ST	Section cross-reference(s): 1, 62				
IT	salen metal complex radical scavenger <b>antioxidant</b>				
IT	<b>Antioxidants</b>				
	Cosmetics				

Radical scavengers  
(salen-metal complexes as catalytic free radical scavengers useful as antioxidants for prevention and therapy of disease)

IT 53177-12-1  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(salen-metal complexes as catalytic free radical scavengers useful as antioxidants for prevention and therapy of disease)

IT 9001-05-2, Catalase 9054-89-1, Superoxide dismutase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(salen-metal complexes as catalytic free radical scavengers useful as antioxidants for prevention and therapy of disease)

IT 27815-84-5 51436-86-3 53140-26-4  
81065-76-1 156467-55-9 186299-31-0  
186299-32-1 186299-33-2 186299-34-3  
186299-35-4 186299-36-5 186299-37-6  
186299-38-7 186299-39-8 186299-40-1  
186299-41-2 186299-42-3 186299-43-4  
186299-44-5 186299-45-6 186299-46-7  
186358-92-9  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(salen-metal complexes as catalytic free radical scavengers useful as antioxidants for prevention and therapy of disease)

L13 ANSWER 6 OF 7 CAPLUS COPYRIGHT 1999 ACS  
AN 1997:28266 CAPLUS  
DN 126:69571  
TI Salen-manganese complexes: combined superoxide dismutase/catalase mimics with broad pharmacological efficacy  
AU Doctrow, Susan R.; Huffman, Karl; Marcus, Catherine B.; Musleh, Wael; Bruce, Annadora; Baudry, Michel; Malfroy, Bernard  
CS Eukarion, Inc., Bedford, MA, 01730, USA  
SO Adv. Pharmacol. (San Diego) (1997), 38(Antioxidants in Disease Mechanisms and Therapy), 247-269  
CODEN: ADPHEL; ISSN: 1054-3589  
PB Academic  
DT Journal; General Review  
LA English  
AB A review with many refs. The authors describe the catalytic properties of EUK-8, a prototype salen-manganese complex and illustrate its efficacy in exptl. models of disease. Future direction in the development of salen-manganese complexes as novel, broadly applicable potential therapeutic agents. Salen-manganese complexes have several characteristics that might facilitate their potential usefulness as therapeutic agents. First, as low mol. wt., synthetic mols. rather than proteinaceous antioxidant enzymes, they have potential advantages. Second, they activity catalytically, presumably enhancing their over noncatalytic low-mol. wt. ROS scavenger such as vitamin E. Third, their ability to destroy both superoxide anion and hydrogen peroxide should enhance their protective potential in various disease states involving the prodn. of multiple ROS species.

IT 53177-12-1, EUK-8  
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(salen-manganese complexes as combined superoxide dismutase/catalase mimics with broad pharmacol. antioxidant efficacy)

CC 1-0 (Pharmacology)  
 ST review salen manganese complex **antioxidant**; EUK8 salen manganese complex **antioxidant** review  
 IT **Antioxidants** (pharmaceutical)  
     (salen-manganese complexes as combined superoxide dismutase/catalase mimics with broad pharmacol. **antioxidant** efficacy)  
 IT 94-93-9D, Salen, manganese complexes 7439-96-5D, Manganese, salen complexes 53177-12-1, EUK-8  
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
     (salen-manganese complexes as combined superoxide dismutase/catalase mimics with broad pharmacol. **antioxidant** efficacy)

L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 1999 ACS

AN 1994:570581 CAPLUS

DN 121:170581

TI Synthetic catalytic free radical scavengers useful as **antioxidants** for prevention and therapy of disease

IN **Malfray-Camine, bernard; Baudry, Michel**

PA Eukarion, Inc., USA

SO PCT Int. Appl., 86 pp.

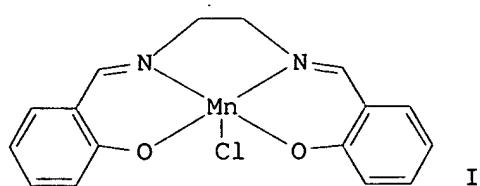
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9413300	A1	19940623	WO 93-US11857	19931206
	W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	<u>US 5403834</u>	A	19950404	US 92-987474	19921207
	CA 2150937	AA	19940623	CA 93-2150937	19931206
	AU 9457419	A1	19940704	AU 94-57419	19931206
	AU 697399	B2	19981008		
	JP 08504211	T2	19960507	JP 93-514328	19931206
	HU 72967	A2	19960628	HU 95-1644	19931206
	EP 746321	A1	19961211	EP 94-903498	19931206
SE	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,				
	GB 2305107	A1	19970402	GB 96-21087	19931206
	GB 2305107	B2	19970514		
	PL 175446	B1	19981231	PL 93-309334	19931206
	GB 2277873	A1	19941116	GB 94-15050	19940726
	GB 2277873	B2	19970514		
	NO 9502237	A	19950801	NO 95-2237	19950606
	LV 10924	B	19961020	LV 95-158	19950606
	<u>US 5696109</u>	A	19971209	US 95-485489	19950607
	<u>US 5834509</u>	A	19981110	US 95-479697	19950607
PRAI	US 92-987474		19921207		
	WO 93-US11857		19931206		
	GB 94-15050		19940706		
	US 95-380731		19950126		
OS	MARPAT		121:170581		
GI					



I

- AB The invention provides **antioxidant salen-metal complexes** in a form suitable for pharmaceutical administration to treat or prevent a disease assocd. with cell or tissue damage produced by free radicals such as superoxide. A particularly effective compd. is I.
- IT 53177-12-1 149580-33-6 149656-59-7  
149656-62-2 149656-63-3 149656-64-4  
149656-65-5 157076-03-4 157106-73-5  
157106-73-5D, amino derivs 157698-76-5  
157698-77-6 157698-78-7D, acyl derivs.  
157698-79-8  
RL: BIOL (Biological study)  
(free radical scavenger as **antioxidant** for disease prevention and therapy)
- IC ICM A61K031-555  
CC 1-12 (Pharmacology)  
ST **antioxidant radical scavenger salen metal complex**  
IT **Antioxidants**  
(salen metal complexes, as free radical scavengers, for disease prevention and therapy)  
IT Radicals, biological studies  
RL: BIOL (Biological study)  
(scavengers for, salen metal complexes as **antioxidant**, for disease prevention and therapy)  
IT 53177-12-1 149580-33-6 149656-59-7  
149656-62-2 149656-63-3 149656-64-4  
149656-65-5 157076-00-1 157076-01-2 157076-02-3  
157076-03-4 157106-72-4 157106-73-5  
157106-73-5D, amino derivs 157698-76-5  
157698-77-6 157698-78-7D, acyl derivs.  
157698-79-8  
RL: BIOL (Biological study)  
(free radical scavenger as **antioxidant** for disease prevention and therapy)  
IT 11062-77-4, Superoxide  
RL: BIOL (Biological study)  
(scavengers for, salen metal complexes as **antioxidant**, for disease prevention and therapy)